



### LOSSAN RAIL CORRIDOR AGENCY TECHNICAL ADVISORY COMMITTEE

**Thursday, May 6, 2021**  
**12:30 P.M. - 2:30 P.M**

Any person with a disability who requires a modification, accommodation or agenda materials in an alternative format in order to participate in the meeting should contact the Los Angeles – San Diego – San Luis Obispo (LOSSAN) Clerk of the Board, telephone 714-560-5676, no less than two (2) business days prior to this meeting to enable LOSSAN to make reasonable arrangements to assure accessibility to this meeting.

Agenda descriptions are intended to give members of the public a general summary of items of business to be transacted or discussed. The posting of the recommended actions does not indicate what action will be taken. The Committee may take any action which it deems to be appropriate on the agenda item and is not limited in any way by the notice of the recommended action.

All documents relative to the items referenced in this agenda are available for public inspection at [www.lossan.org](http://www.lossan.org).

#### **Guidance for Public Access to the TAC Committee Meeting**

On March 12, 2020 and March 18, 2020, Governor Gavin Newsom enacted Executive Orders N-25-20 and N-29-20 authorizing a local legislative body to hold public meetings via teleconferencing and make public meetings accessible telephonically or electronically to all members of the public to promote social distancing due to the state and local State of Emergency resulting from the threat of Novel Coronavirus (COVID-19).

In accordance with Executive Order N-29-20, and in order to ensure the safety of the Orange County Transportation Authority (OCTA) Board of Directors (Board) and staff and for the purposes of limiting the risk of COVID-19, in-person public participation at public meetings of the OCTA will not be allowed during the time period covered by the above-referenced Executive Orders.

Instead, members of the public can listen to AUDIO live streaming of the TAC Committee meetings with TEAMS by clicking the below link:

[TAC Meeting Live Stream](#)

Public comments may be submitted for the upcoming Committee meetings by emailing them to [lossantac@octa.net](mailto:lossantac@octa.net)



## TECHNICAL ADVISORY COMMITTEE AGENDA

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### **Guidance for Public Access to TAC Committee Meeting (Continued)**

If you wish to comment on a specific agenda Item, please identify the Item number in your email. All public comments that are timely received will be part of the public record and distributed to the Committee. Public comments will be made available to the public upon request.

In order to ensure that staff has the ability to provide comments to the TAC Committee Members in a timely manner, please submit your public comments 30 minutes prior to the start time of the Committee meeting date.

# TECHNICAL ADVISORY COMMITTEE AGENDA

## 2021 TECHNICAL ADVISORY COMMITTEE

### Technical Advisory Committee - Membership Roster

	Member Agencies	Appointee	Alternate
North	San Luis Obispo Council of Governments	Anna Devers	Tim Gillham
	Santa Barbara County Association of Governments	Scott Spaulding	Lauren Bianchi Klemann
	Ventura County Transportation Commission	Claire Grasty	Martin Erickson
Central	Los Angeles County Metropolitan Transportation Authority	Jay Fuhrman	Jeanet Owens
South Central	Orange County Transportation Authority	Megan LeMaster	Alexis Murillo Felix
	Riverside County Transportation Commission	Sheldon Peterson	Vacant
South	San Diego Metropolitan Transit System	Brent Boyd	Julia Tuer
	North County Transit District	Damon Blythe	Michael Johnson
	San Diego Association of Governments	Danny Veeh	Linda Culp

## Call to Order

### 1. Public Comments

At this time, members of the public may address the Technical Advisory Committee regarding any items within the subject matter jurisdiction of the Technical Advisory Committee, but no action may be taken on off-agenda items unless authorized by law. Comments shall be limited to three (3) minutes per speaker unless different time limits are set by the Chairman subject to the approval of the Technical Advisory Committee.

## Consent Calendar

All items on the Consent Calendar are to be approved in one motion unless a Committee Member or a member of the public requests separate action or discussion on a specific item.

### 2. Approval of Minutes

James D. Campbell

#### Overview

Approval of the minutes from the February 4, 2021, LOSSAN Technical Advisory Committee meeting.

#### Recommendation

Receive and file as an information item.

### 3. The Los Angeles – San Diego – San Luis Obispo Rail Corridor Trends for the Fourth Quarter of Federal Fiscal Year 2019 20

Roger M. Lopez

#### Overview

A report on ridership, revenue, and on-time performance trends for passenger rail services on the Los Angeles - San Diego - San Luis Obispo rail corridor, including the Pacific Surfliner, Metrolink, and COASTER, covering the fourth quarter of federal fiscal year 2019-20.

#### Recommendation

Receive and file as an information item.



## Regular Calendar

There are no Regular Calendar matters.

## Discussion Calendar

### 4. **Pacific Surfliner On-Time Performance Analysis**

Roger M. Lopez

#### **Overview**

Staff will provide a detailed analysis of Pacific Surfliner on time performance during the fourth quarter of federal fiscal year 2020-21.

### 5. **Capital Program Update**

James D. Campbell

#### **Overview**

Staff will provide an update on the progress of ongoing capital projects along the Los Angeles – San Diego – San Luis Obispo rail corridor, and their associated funding, including the Central Coast Layover Facility, Union Pacific Santa Barbara Subdivision projects, Goleta Layover Facility Expansion, and San Diego County Layover and Maintenance Facility.

### 6. **Summer 2021 Schedule Change and Service Recovery**

James D. Campbell

#### **Overview**

The Los Angeles – San Diego – San Luis Obispo Rail Corridor Agency, in coordination with Amtrak, the North County Transit District, and Metrolink, coordinate planned schedule changes for passenger rail services along the Los Angeles – San Diego – San Luis Obispo rail corridor. Staff will provide an overview of the planned summer changes that include restoration of limited Pacific Surfliner intercity passenger rail service.

### 7. **Proposed Adjustment to 2021 Board of Directors and Committee Meeting Schedule**

James D. Campbell

#### **Overview**

Staff has updated the proposed Los Angeles – San Diego – San Luis Obispo Rail Corridor Agency Board of Directors and Committee meetings schedule for calendar year 2021 to reflect input from the Board of Directors and Technical Advisory Committee, and is consistent with the development of key deliverables and actions anticipated for calendar year 2021.

**8. San Diego-LOSSAN Regional Rail Corridor Improvement Study Update**  
Danny Veeh, SANDAG

**Overview**

Receive an informational update from the San Diego Association of Governments on the San Diego-LOSSAN Corridor Study, which seeks to identify corridor improvements in San Diego County that reduce travel times, add capacity, and enhance safety, including alternatives analysis for the long-term realignment of the corridor in the City of Del Mar and Miramar Hill area.

**9. Upcoming Agenda Items**  
James D. Campbell

**Overview**

Overview of upcoming agenda items for the Los Angeles – San Diego – San Luis Obispo Rail Corridor Agency Board of Directors.

**10. Los Angeles – San Diego – San Luis Obispo Rail Corridor Agency Update**

**11. Technical Advisory Committee Members' Report**

**12. Adjournment**

The regularly scheduled meeting of this Committee will be held:

Thursday, June 3, 2021

Location: TBD



# Los Angeles – San Diego – San Luis Obispo Rail Corridor Agency **TECHNICAL ADVISORY COMMITTEE**

## **FEBRUARY 4, 2021 MEETING MINUTES**

The Los Angeles – San Diego – San Luis Obispo (LOSSAN) Rail Corridor Agency (Agency) Technical Advisory Committee (TAC) met on February 4, 2021, at 12:30 p.m. via TEAMS conference call.

### **Committee members in attendance:**

*Via Teleconference:*

Scott Spaulding, SBCAG  
Lauren Bianchi Klemann, SBCAG  
Claire Grasty, VCTC  
Martin Erickson, VCTC  
Megan LeMaster, OCTA  
Sheldon Peterson, RCTC  
Graham Blackwell, NCTD  
Danny Veeh, SANDAG  
Brent Boyd, MTS  
Steven Fox, SCAG  
Jerry Romana, HSR  
Tamara Noel, BNSF  
Cindy Stone, BNSF  
Peggy Harris, UPRR  
Victor Stone, UPRR  
Ryan Greenway, Caltrans  
Anthony Serna, Caltrans  
Allen, Caltrans  
Kevin Banks, Amtrak  
Jay Fuhrman, LA Metro  
Anna Devers, SLOCOG  
Timothy Corbett, Amtrak

### **Welcome and Introductions**

The February 4, 2021, LOSSAN Agency TAC meeting was called to order by Mr. James Campbell, LOSSAN Program Manager, who welcomed the LOSSAN TAC to the TEAMS conference call. Mr. Campbell asked the participants over the teleconference line for introductions.

### **1. Public Comments**

*There were no Public Comments.*

## **CONSENT CALENDAR**

### **2. Approval of Minutes**

*This item was moved by Danny Veeh (SANDAG) and seconded by Megan LeMaster (OCTA). The Committee approved the November 2020 meeting minutes.*

## **REGULAR CALENDAR**

There were no Regular Calendar matters.

## **DISCUSSION CALENDAR**

### **3. Fiscal Year 2021-22 Annual Business Plan – Final Draft Discussion**

Mr. Roger Lopez (LOSSAN) provided a final update on the Business Plan before its presented to the Board of Directors. Mr. Lopez mentioned Chapters 8, 11, and 12 were not sent out due to minimal changes requested. The Board will have an opportunity to weigh in on questions and changes.

*A brief discussion ensued regarding the updated chapters. Mr. Lopez presented explanations to why certain revisions and updates were made. There was no further discussion.*

### **4. San Diego County Layover and Maintenance Facility Study & Recommendation**

Mr. Campbell provided a presentation of the facility study and recommendation, including a brief background on the study. The presentation included a summary of the initial sites identified, the evaluation methodology site characteristics, environmental constraints, and cost estimates.

*A brief discussion ensued on the approved budget to the study. Mr. Campbell confirmed that 28.4 million was awarded for the project through the 2020 Transit and Intercity Rail Capital Program. There was no further discussion.*

### **5. Marketing Update**

Ms. Emilia Doerr (LOSSAN) provided an overview on the recent marketing activities with a brief 2020 performance summary, COVID-19 impacts along the rail corridor, as well as the outlook for 2021 ridership and the public's desire to travel again in California. Ms. Doerr also mentioned the proposed COVID-19 response to campaign results and the efforts to recover ridership again.

*There was no further discussion.*

## **6. Upcoming Agenda Items**

Mr. Campbell (LOSSAN) provided a brief overview of the agenda items for the February 2021 Board of Directors meeting.

*A brief discussion ensued on several Board agenda items. There was no further discussion.*

## **7. Los Angeles – San Diego – San Luis Obispo Rail Corridor Agency Update**

Mr. Campbell (LOSSAN) mentioned LOSSAN will be hosting a public scoping meeting for the Central Coast Layover Facility project in conjunction with the City of San Luis Obispo Planning Commission.

Mr. Campbell also mentioned that 10 Pacific Surfliner Business Class cars will be undergoing an upgrade and refresh and should be completed by this Spring.

Mr. Campbell also mentioned that Pacific Surfliner and Amtrak have come to an agreement to upgrade the Pacific Surfliner Wi-Fi system and this project is scheduled to begin in the upcoming weeks.

## **8. Technical Advisory Committee Members' Report**

*Mr. Brent Boyd, MTS mentioned ridership has been steady, the future blue line extension from Old Town to UC San Diego is scheduled to open in November.*

*Mr. Danny Veeh, SANDAG, shared they received funding for the Broadway to Gaslamp project that would include a Convention Center Gaslamp Quarter platform for COASTER and some other track improvements. Also, the El Portal Undercrossing project in the City of Encinitas will be similar to the Santa Fe Undercrossing project. Lastly, SANDAG will have new Board Members on the LOSSAN Board. All members have been appointed but will not be publicly announced until the Board meeting.*

*Mr. Graham Blackwell, NCTD, shared that North County ridership is low, but stable. Also, on February 8<sup>th</sup>, there will be a service launch of the new charger locomotives for service, which includes the introduction of the first four overhaul bi-levels back into service. Mr. Blackwell also mentioned that mid-day service will be back in April.*

*Ms. Megan LeMaster mentioned that Metrolink will not be providing any bus bridges for the upcoming absolute work windows on the weekends.*

*Mr. Sheldon Peterson, RCTC, gave a quick update on the Coachella Valley environmental document and service plan. The draft will be released in late Spring.*

*Mr. Jay Fuhrman, Metro, mentioned CEO Phil Washington announced he would be leaving the agency in May, when his contract ends.*

*Ms. Claire Grasty, VCTC, shared the progress of the double track project in Simi Valley where Metrolink is getting ready for right-of-way acquisitions.*

*Ms. Anna Devers, SLOCOG, mentioned the integration study should be ready for review, then it will go to the Board for adoption in April and SLOCOG is working with LOSSAN with the scoping meeting with the City of San Luis Obispo.*

*Mr. Victor Stone, Union Pacific, mentioned a washout was repaired, along with other corridor improvements that are ongoing as part of the LOSSAN funded capital improvements agreement.*

*Mr. Ryan Greenway, Caltrans, gave an update on the state rail plan and some efforts going on. Caltrans is currently updating the service plans for the 2022 State Rail Plan and will be engaging with regional funding and operating stakeholders in strategic planning exercises that will seek to align local priorities with State planning.*

*The TAC also requested consideration of starting the TAC meetings a ½ hour later, which would be 1pm. Mr. Campbell will follow-up.*

## **9. Adjournment**

The next regularly scheduled meeting of this Committee will be held on:

Thursday, March 4, 2021

Location: TBD

12:30 p.m. – 2:30 p.m.



**May 6, 2021**

**To:** Members of the Technical Advisory Committee  
**From:** Donna DeMartino, Managing Director *Donna DeMartino*  
**Subject:** The Los Angeles – San Diego – San Luis Obispo Rail Corridor  
Trends for the Fourth Quarter of Federal Fiscal Year 2019-20

### **Overview**

A report on ridership, revenue, and on-time performance trends for passenger rail services on the Los Angeles – San Diego – San Luis Obispo rail corridor, including the Pacific Surfliner, Metrolink, and COASTER, covering the fourth quarter of federal fiscal year 2019-20.

### **Recommendation**

Receive and file as an information item.

### **Background**

The 351-mile Los Angeles – San Diego – San Luis Obispo (LOSSAN) rail corridor travels through a six-county coastal region in Southern California and is the busiest state-supported intercity passenger rail corridor in the United States. The LOSSAN rail corridor includes 41 stations and typically hosts more than 150 daily passenger trains and an annual ridership of more than 2.7 million on Pacific Surfliner intercity passenger rail trains and about 5.4 million on Metrolink and COASTER commuter trains.

### **Discussion**

This report provides an update on the performance of the passenger rail services operating on the LOSSAN rail corridor by presenting the current trends of the service in three specific areas: usage (ridership and passenger miles), efficiency (revenue and farebox recovery), and quality (on-time performance (OTP) and customer satisfaction). The report includes the Pacific Surfliner intercity passenger rail service, as well as commuter rail service on Metrolink's Ventura County Line (VCL) and Orange County Line (OCL), and the North County Transit District's COASTER system. Amtrak national data is included for comparative purposes. The

reporting period is the fourth quarter of federal fiscal year (FFY) 2019-20, covering the months of July, August, and September 2020.

### Coronavirus Pandemic

The coronavirus (COVID-19) pandemic has had significant global impacts on transit ridership and operations, including the three rail services operating on the LOSSAN rail corridor. Attributable ridership and revenue declines were observed at the end of February 2020, and drastic declines followed Governor Newsom's safer-at-home order, effective March 15, 2020. Shortly thereafter, the Pacific Surfliner, COASTER, and Metrolink implemented temporary service reductions on their respective intercity and commuter passenger rail services. The Pacific Surfliner and COASTER began service reductions on March 23, 2020, and Metrolink reduced its service on March 26, 2020.

### Usage

For the fourth quarter of FFY 2019-20, total LOSSAN rail corridor ridership on the three services was 251,097, an 88.6 percent decrease when compared to the same period of the previous year. A 24-month ridership chart for the LOSSAN rail corridor, with the specific performance of each service, can be found in Figure 1.1.

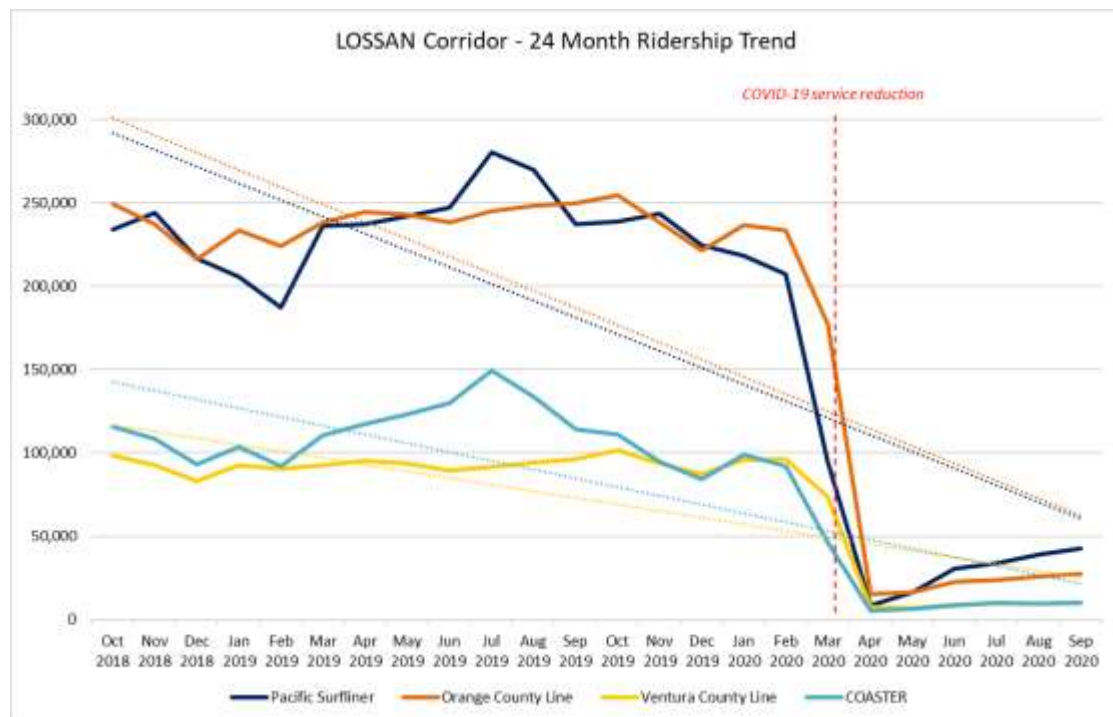


Figure 1.1



The 24 months of ridership data included in Figure 1.1 provide a more accurate indicator of the overall change in ridership along the corridor. Due to seasonal variances, a complete ridership trend is difficult to discern from a single 12-month period. Including 24 months of data accounts for the seasonal variation and provides sufficient information to allow for the development of a linear trendline for each service. A summary table of the ridership, revenue, and OTP for the LOSSAN rail corridor can be found in Attachment A. In addition to this overall corridor data, details on the performance of each service are provided below.

### Pacific Surfliner

The overall decrease in LOSSAN rail corridor ridership includes ridership on the Pacific Surfliner (San Luis Obispo to San Diego) intercity passenger rail service, which decreased during the fourth quarter of FFY 2019-20 by 85.4 percent when compared to the same period last year, as is demonstrated in Figure 1.2. The low ridership is attributable to the reduced service and travel restrictions associated with the COVID-19 pandemic. The reported Pacific Surfliner ridership includes Metrolink and COASTER pass holders utilizing the Rail 2 Rail (R2R) Program, which allows Metrolink monthly pass holders and COASTER passengers to ride Pacific Surfliner trains within the stations identified on their valid fare media, subject to certain restrictions.

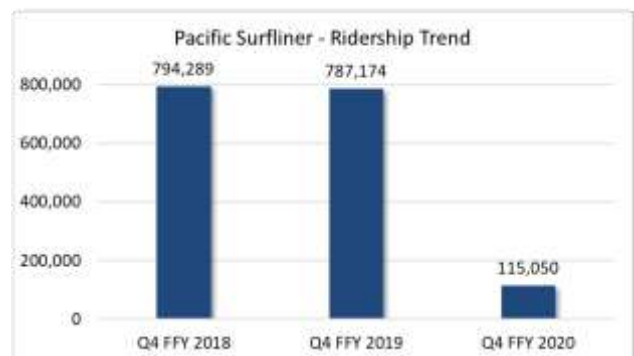


Figure 1.2

### Metrolink

Overall LOSSAN rail corridor ridership was also negatively impacted by the ridership decrease on Metrolink's VCL, as demonstrated in Figure 1.3. The VCL, which operates between East Ventura and Los Angeles, saw a ridership decrease of 89.6 percent when compared to the fourth quarter of last year. The OCL, which operates between Los Angeles and Oceanside, saw the same 89.6 percent decrease in ridership over the same report period in the prior year.

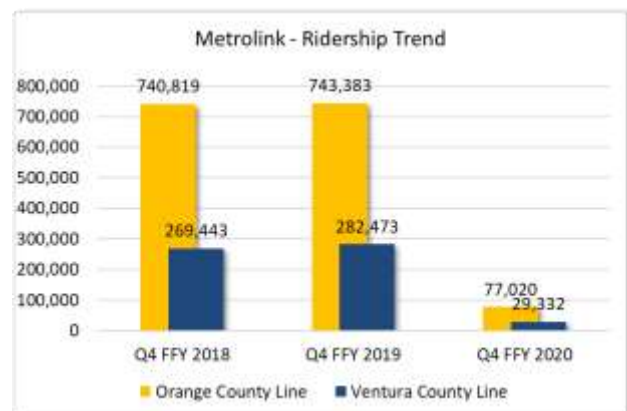


Figure 1.3

Metrolink pass holders riding Pacific Surfliner trains, utilizing the R2R Program, averaged 35 per weekday for the fourth quarter of FFY 2019-20, which is a decrease of 96.5 percent compared to the same period last year.<sup>1</sup>

## COASTER

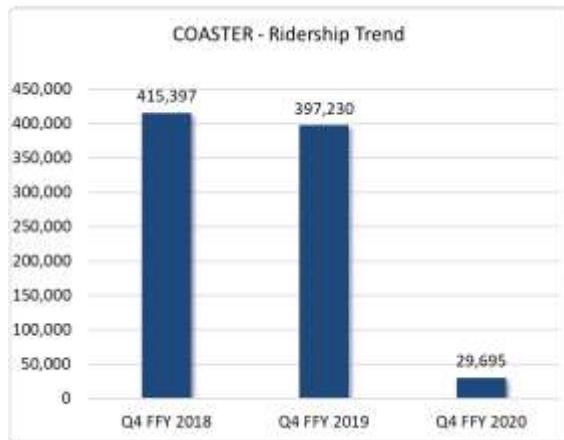


Figure 1.4

COASTER (providing commuter rail service between Oceanside and San Diego) ridership decreased by 92.5 percent during the fourth quarter of FFY 2019-20 when compared to the same period the prior year, as shown in Figure 1.4. During the fourth quarter of FFY 2019-20, there were an average of three COASTER pass holders per day on Pacific Surfliner trains, utilizing the R2R program. This was a decrease of 90.3 percent when compared to last year.

## Amtrak System

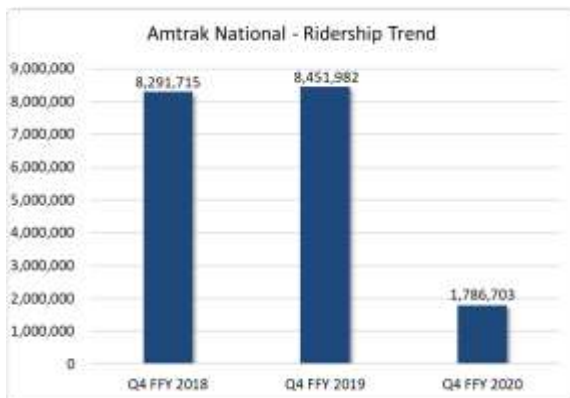


Figure 1.5

Not immune to the significant impacts of the COVID-19 pandemic, Amtrak service nationwide experienced a cumulative ridership decrease of 78.9 percent for the fourth quarter of FFY 2019-20 compared with the same period the prior year, as illustrated in Figure 1.5.

Amtrak's Coast Starlight (Seattle to Los Angeles) saw ridership decrease by 52.4 percent in the fourth quarter compared with the same period last

year. The Capitol Corridor (Auburn/Sacramento to Oakland and San Jose) and the San Joaquins Corridor (Sacramento/Oakland to Bakersfield) are the other two California State-supported intercity passenger rail services operated by Amtrak, and although serving significantly different markets, do provide a comparison to the Pacific Surfliner service. Ridership on the Capitol Corridor decreased by 87.4 percent and San Joaquins ridership decreased by 69.4 percent in the fourth quarter compared to the same period last year.

<sup>1</sup> Metrolink R2R values are based on preliminary, unaudited data provided by Amtrak.

## Passenger Miles

A passenger mile is defined as one passenger traveling one mile. As an example, 10 passengers, each traveling 100 miles, would generate 1,000 passenger miles. This metric depicts the growth in passenger usage and distance traveled.

The Pacific Surfliner generated over 11 million passenger miles during the fourth quarter of FFY 2019-20, which is an 84.2 percent decrease compared to the same period in the prior year. The decrease in passenger miles aligns with the overall decrease in ridership. Factoring in the average pounds of carbon dioxide emissions per passenger mile in a private automobile versus riding on passenger rail, those 11 million passenger miles resulted in a reduction of over 4,013 tons of greenhouse gases. The pollution avoided is equivalent to burning nearly 410,000 gallons of gasoline.

## Efficiency

### Revenue



Figure 1.6

In correlation with the ridership decrease due to the COVID-19 pandemic, ticket revenue for the Pacific Surfliner also underperformed. For the fourth quarter of FFY 2019-20, overall revenue decreased by 83.4 percent when compared with the same period in the prior year, as shown in Figure 1.6.

For the Capitol Corridor, total revenue decreased by 85.7 percent, the San Joaquin rail corridor saw a decrease of 66.4 percent, and the Coast Starlight decreased by 60.1 percent in the fourth quarter compared to last year.

## Farebox Recovery

The Pacific Surfliner is legislatively required to achieve a minimum of 55 percent farebox recovery. As a performance measure, farebox recovery is normally calculated on an annual basis. Expenses throughout the year are not linear and can cause significant fluctuations in the farebox recovery ratio from quarter to quarter.

The California Department of Transportation Division of Rail and Mass Transportation (DMRT) usually reports quarterly to the California Transportation Commission (CTC) on all state-supported corridors via the *California Department of Transportation's Intercity Passenger Rail Operations Report*. This report focuses on a rolling 12-month report period instead of the quarter. On December 2, 2020, Caltrans DMRT reported to the CTC on the 12 months ending June 30, 2020 (the most recent available data) and indicated that the Pacific Surfliner realized a 54.6 percent farebox recovery ratio for that time period.

### Quality

#### OTP

The methodologies for calculating OTP vary significantly between intercity and commuter rail services. Commuter trains are considered late if trains arrive six or more minutes late to the terminal location. Pacific Surfliner trains are considered late if trains arrive 15 or more minutes after scheduled arrival times.

In the fourth quarter of FFY 2019-20, average endpoint Pacific Surfliner OTP was 92.0 percent, which was an amazing 27.4 percent increase over the prior year. The significant service reduction that occurred in March 2020 lead to reduced train volumes throughout the LOSSAN corridor. As such, an improvement in OTP was anticipated. A monthly OTP trend for the Pacific Surfliner can be seen in Figure 1.7.

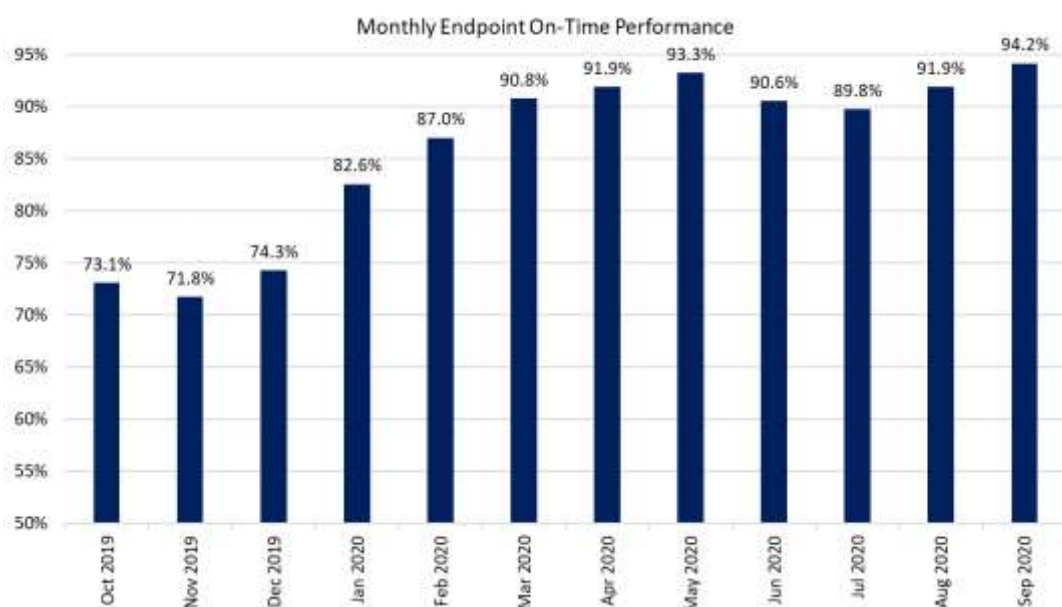


Figure 1.7

The LOSSAN Rail Corridor Agency (Agency) will continue to work collaboratively with the Corridor Improvement Team via quarterly meetings to ensure that OTP performance remains high as service is eventually restored.

### Customer Satisfaction

Amtrak reports an Electronic Customer Satisfaction Index (eCSI) score monthly for all routes, in which a 'very satisfied' percentage is calculated out of 100 passengers via electronic survey. Unfortunately, for the fourth quarter, the reduced ridership lead to an insufficient number of respondents to accurately calculate the eCSI score. As ridership increases, this metric will return.

### Additional Performance Indicators

#### Food and Beverage Sales

The LOSSAN Agency's focus on improving service quality and the customer experience has prompted additional attention to the food and beverage selections offered in the Pacific Surfliner Café car. Continual effort is made to ensure that menu items are meeting the expectations of our

<b>Sales Category</b>	<b>FFY19 Q4</b>	<b>FFY20 Q4</b>	<b>% Change</b>
Baked Goods	\$ 113,539	\$ 20,690	-81.8%
Beer	\$ 362,200	\$ 55,987	-84.5%
Beverages	\$ 412,291	\$ 61,542	-85.1%
Dairy Products	\$ 13,935	\$ 873	-93.7%
Fresh Prepared Foods	\$ 272,824	\$ 11,639	-95.7%
Liquor	\$ 208,943	\$ 37,653	-82.0%
Miscellaneous Merchandise	\$ 7,589	\$ 1,811	-76.1%
Packaged Snack Foods	\$ 1,093,638	\$ 131,482	-88.0%
Salads	\$ 23,561	\$ -	-100.0%
Wine	\$ 606,147	\$ 65,879	-89.1%
<b>Total Revenue</b>	<b>\$ 3,114,667</b>	<b>\$ 387,557</b>	<b>-87.6%</b>

*Figure 1.8*

passengers. As part of that effort, LOSSAN Agency staff closely monitors food and beverage sales to gauge the success of what is being offered and to highlight items that need to be adjusted.

For the fourth quarter of FFY 2019-20, food and beverage sales decreased by 87.6 percent over the same quarter in the prior year. In addition to the decrease in ridership, Café car sales were impacted by the restrictions associated with indoor dining. The sales of salads and fresh prepared foods was discontinued to prevent losses associated with spoilage as a result of reduced demand. Subsequently, hot prepared food had to be temporarily suspended to ensure the safety and health of all involved by limiting the interactions necessary between the passengers and Café car attendants.

Various safety measures, including the installation of plexiglass barriers, have allowed for the return of microwavable food items. As these items return and ridership increases, we anticipate Café car revenue to follow the same trend. Details on the performance of each specific sales category are included in Figure 1.8.

### **Amtrak Thruway Bus Service**

Pacific Surfliner rail service is supplemented by Amtrak's network of Thruway buses that connect passengers throughout the LOSSAN rail corridor. The bus routes function as part of the Pacific Surfliner service and include:

- Route 4: Los Angeles to Santa Barbara/Goleta. Two daily one-way trips.
- Route 17: Santa Barbara to San Luis Obispo to Oakland (where it connects with Capitol Corridor). Eleven daily one-way trips.
- Route 39: Fullerton to Palm Springs and Coachella Valley. Four daily one-way trips.

For the fourth quarter of FFY 2019-20, ridership on these three routes totaled 8,337 riders, which was a decrease of 63.9 percent when compared to the same period in the prior year (23,114 riders).

### ***Summary***

This report provides an update of trends for the usage, efficiency, and quality of the passenger rail services on the Los Angeles – San Diego – San Luis Obispo rail corridor, including the Pacific Surfliner, Metrolink and COASTER, for the fourth quarter of federal fiscal year 2019-20. During the fourth quarter, total Los Angeles – San Diego – San Luis Obispo rail corridor ridership decreased by 88.6 percent compared to the same period last year. Ridership on the Pacific Surfliner decreased by 85.4 percent, and revenue realized a 83.4 percent decline when compared to the same period last year.

***Attachment***

- A. Los Angeles – San Diego – San Luis Obispo Rail Corridor Performance  
Summary, Fourth Quarter Federal Fiscal Year 2019-20

**Prepared by:**

A handwritten signature in black ink, appearing to read 'Roger M. Lopez', with a long horizontal line extending to the right.

Roger M. Lopez  
Manager, Planning and Analysis  
(714) 560-5438

**Los Angeles – San Diego – San Luis Obispo Rail Corridor Performance Summary  
Fourth Quarter Federal Fiscal Year 2019-20**

<b><u>Service</u></b>	<b><u>Ridership (total)</u></b>	<b><u>Ridership - Growth Over Same Quarter Previous Year</u></b>	<b><u>Revenue (total)</u></b>	<b><u>Revenue - Growth Over Same Quarter Previous Year</u></b>	<b><u>Endpoint OTP (3 mo. avg)</u></b>
Pacific Surfliner	115,050	-85.4%	\$ 3,719,619	-83.4%	92.0%
Metrolink Ventura County Line	29,332	-89.6%	---	---	96.3%
Metrolink Orange County Line	77,020	-89.6%	---	---	97.6%
COASTER	29,695	-92.5%	---	---	94.0%
<b>LOSSAN Total/Average</b>	<b>251,097</b>	<b>-88.6%</b>	<b>---</b>	<b>---</b>	<b>---</b>

Amtrak Nationwide	1,786,703	-78.9%	\$ 119,724,203	-80.1%	83.7%
Capitol Corridor	56,566	-87.4%	\$ 1,267,058	-85.7%	87.1%
San Joaquin	80,860	-69.4%	\$ 2,660,202	-66.4%	87.3%
Coast Starlight	54,501	-52.4%	\$ 4,947,306	-60.1%	84.1%





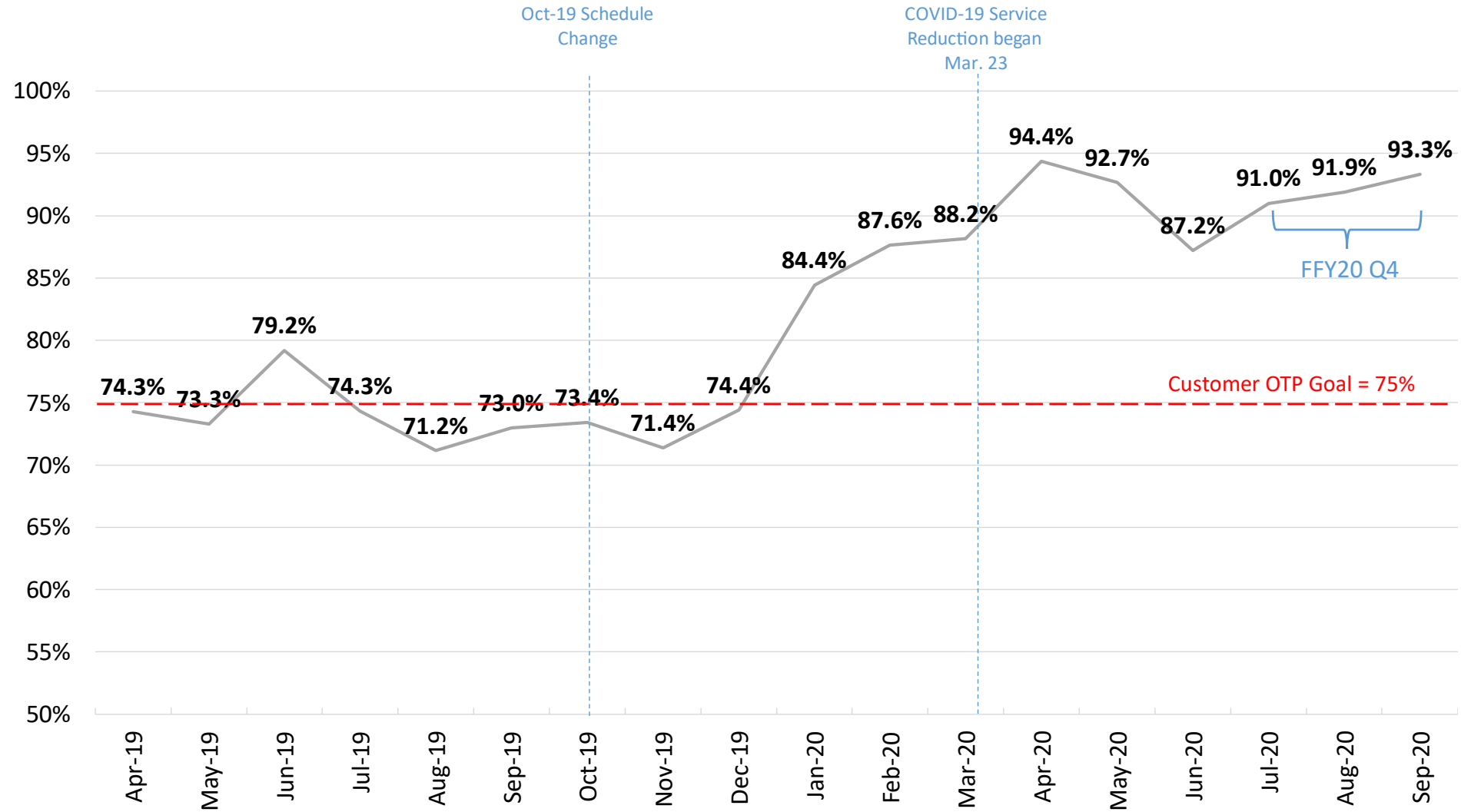
# Pacific Surfliner

## On-Time Performance Analysis

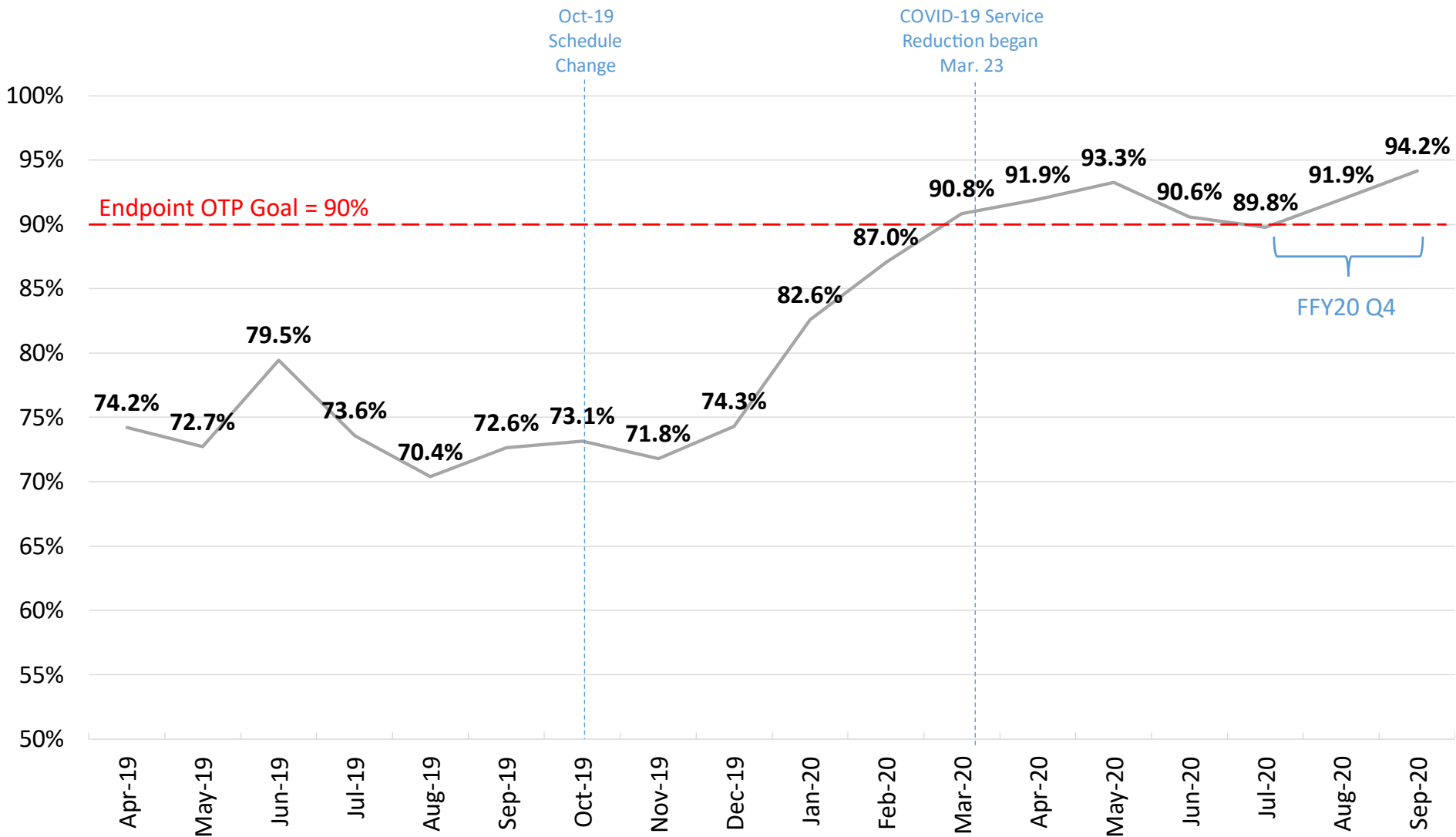
Fourth Quarter – Federal Fiscal Year 2019-20

Technical Advisory Committee  
May 6, 2021

# Monthly Average Customer On-Time Performance (OTP)



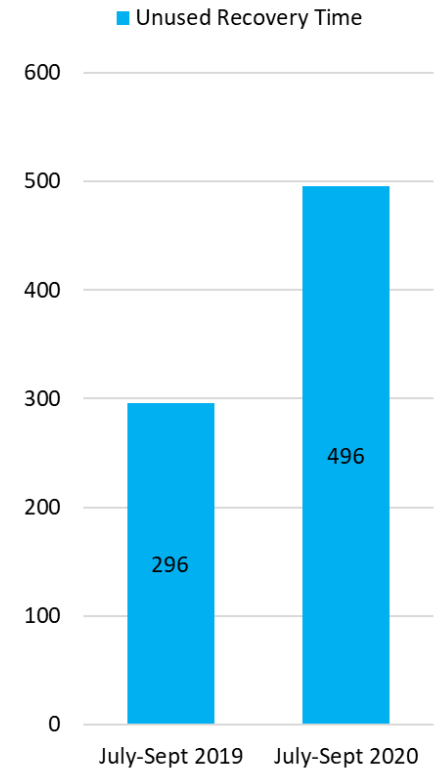
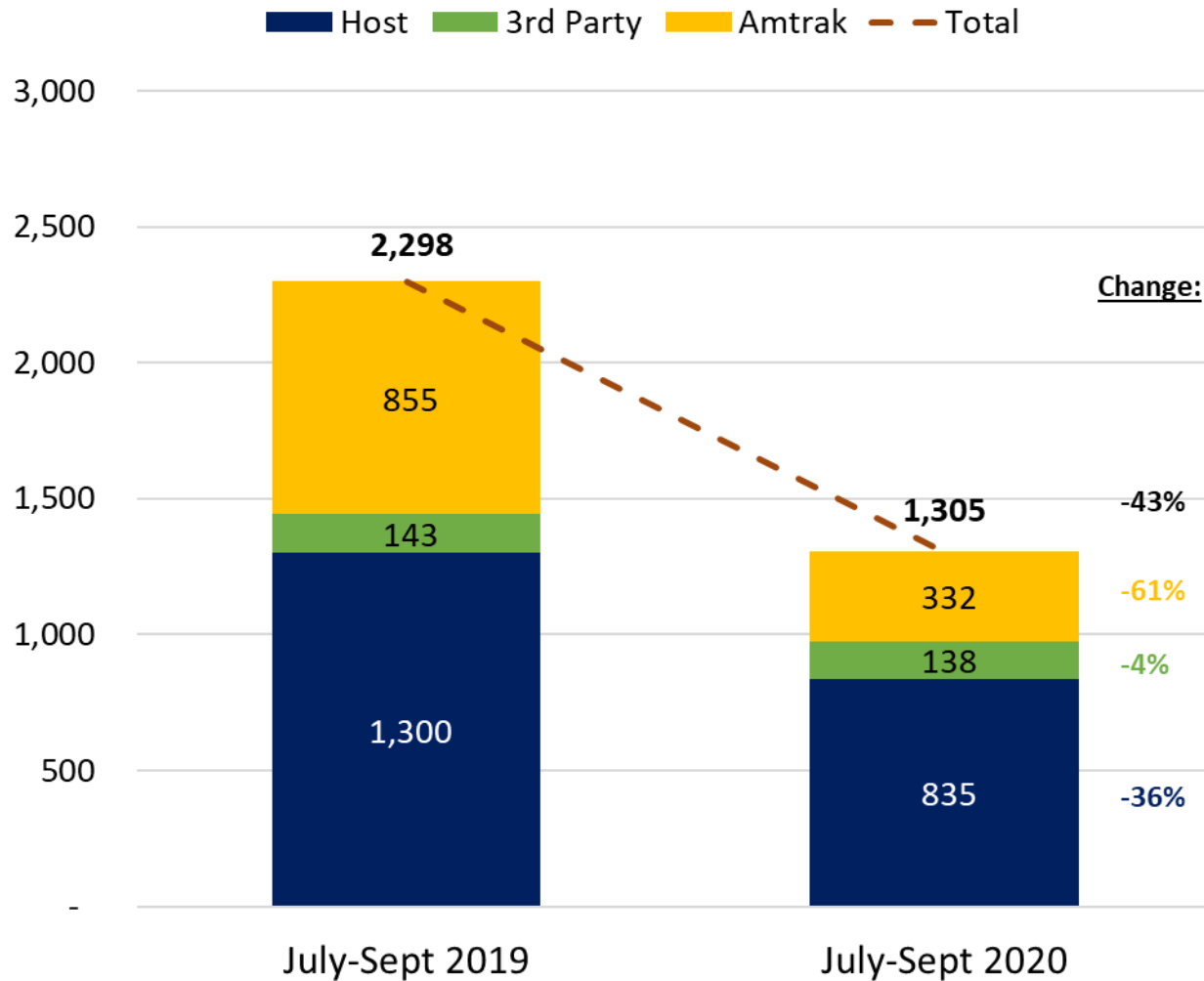
# Monthly Average Endpoint OTP



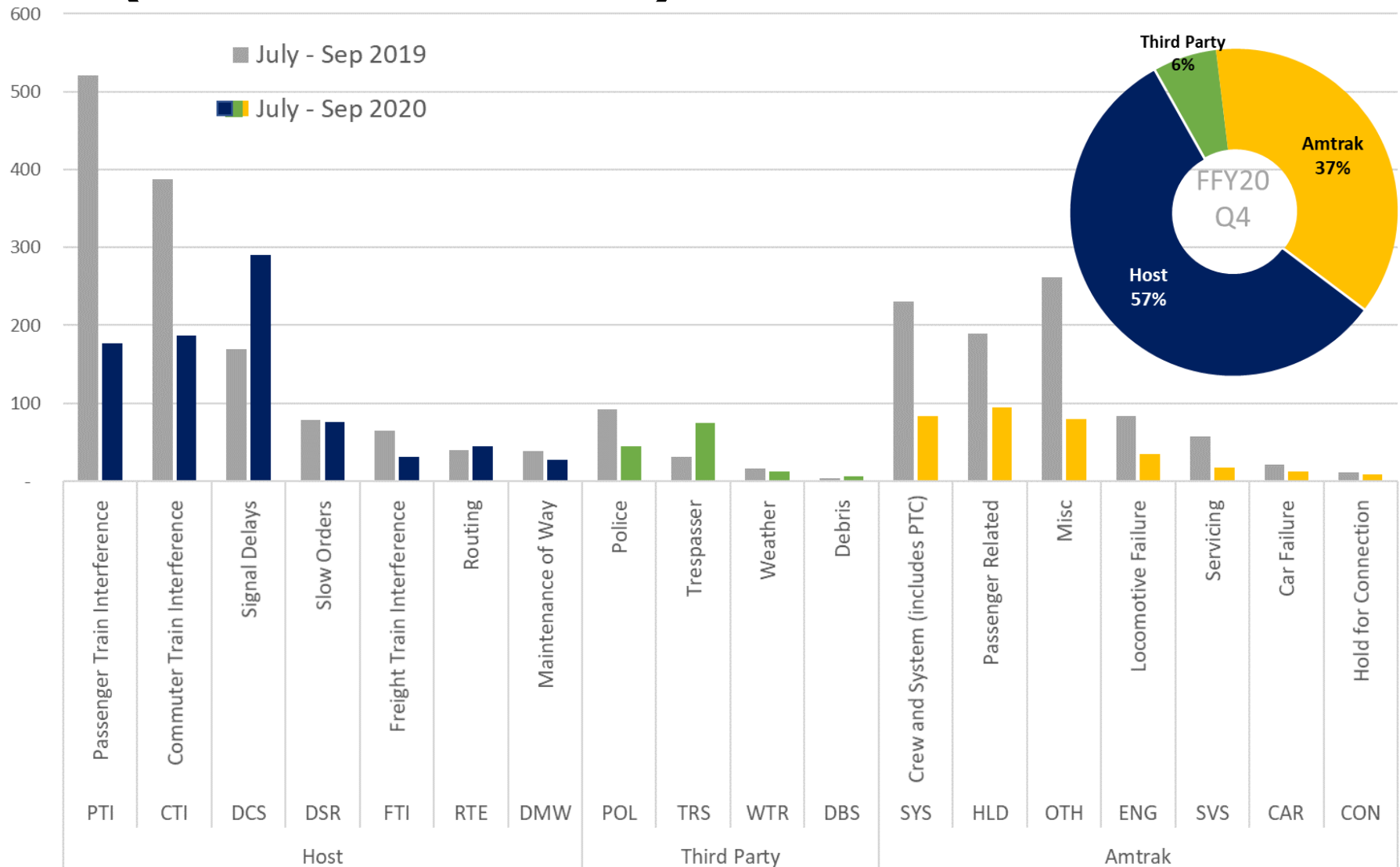
# FFY20 Fourth Quarter (Q4) Average Endpoint OTP by Train

Train	Jul-20	Aug-20	Sep-20	3 Month Average
1564	100.0%	100.0%	100.0%	100.0%
1767	100.0%	100.0%	100.0%	100.0%
564	100.0%	95.2%	100.0%	98.4%
767	95.7%	100.0%	95.2%	97.0%
584	95.7%	95.2%	100.0%	97.0%
1584	100.0%	100.0%	88.9%	96.3%
768	90.3%	93.5%	100.0%	94.6%
579	90.3%	93.5%	96.7%	93.5%
785	87.1%	90.3%	100.0%	92.5%
774	90.3%	96.8%	90.0%	92.4%
796	90.3%	87.1%	96.7%	91.4%
580	83.9%	96.8%	86.7%	89.1%
593	90.3%	87.1%	86.7%	88.0%
777	80.6%	87.1%	90.0%	85.9%
763	80.6%	77.4%	90.0%	82.7%
<b>System Average</b>	<b>89.8%</b>	<b>91.9%</b>	<b>94.2%</b>	<b>92.0%</b>

# Delays by Responsible Party (Per 10K Train Miles) FFY19 Q4 v. FFY20 Q4

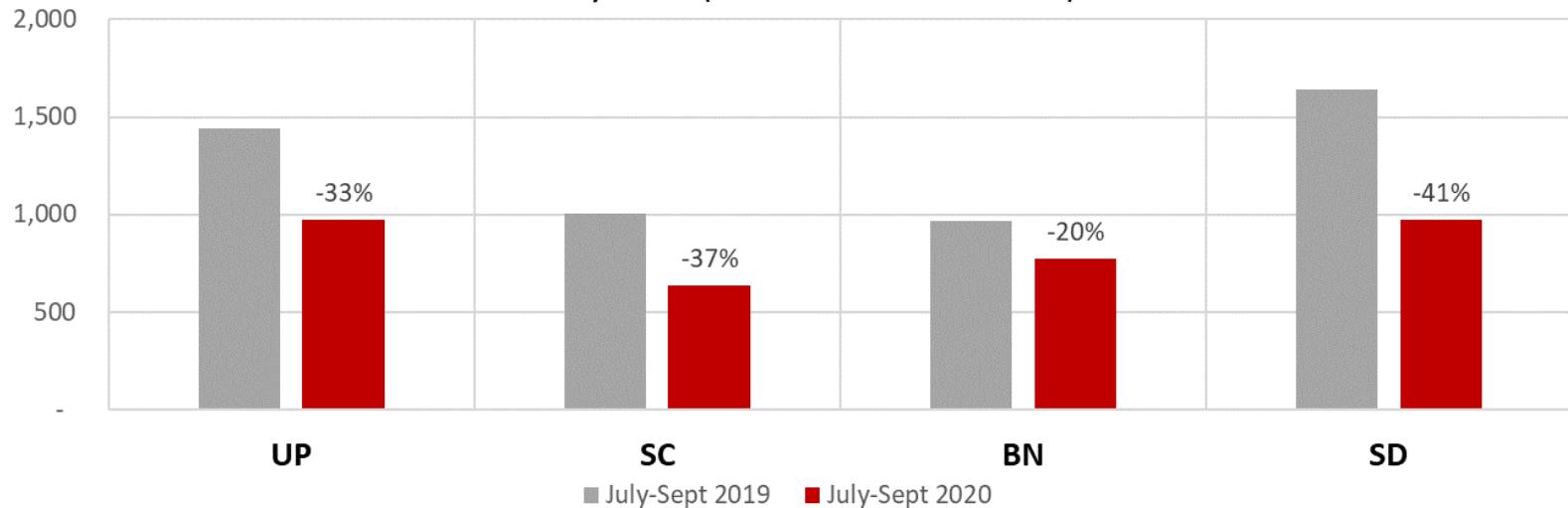


# Delays by Category & Responsible Party (Per 10K Train Miles) FFY19 Q4 v. FFY20 Q4

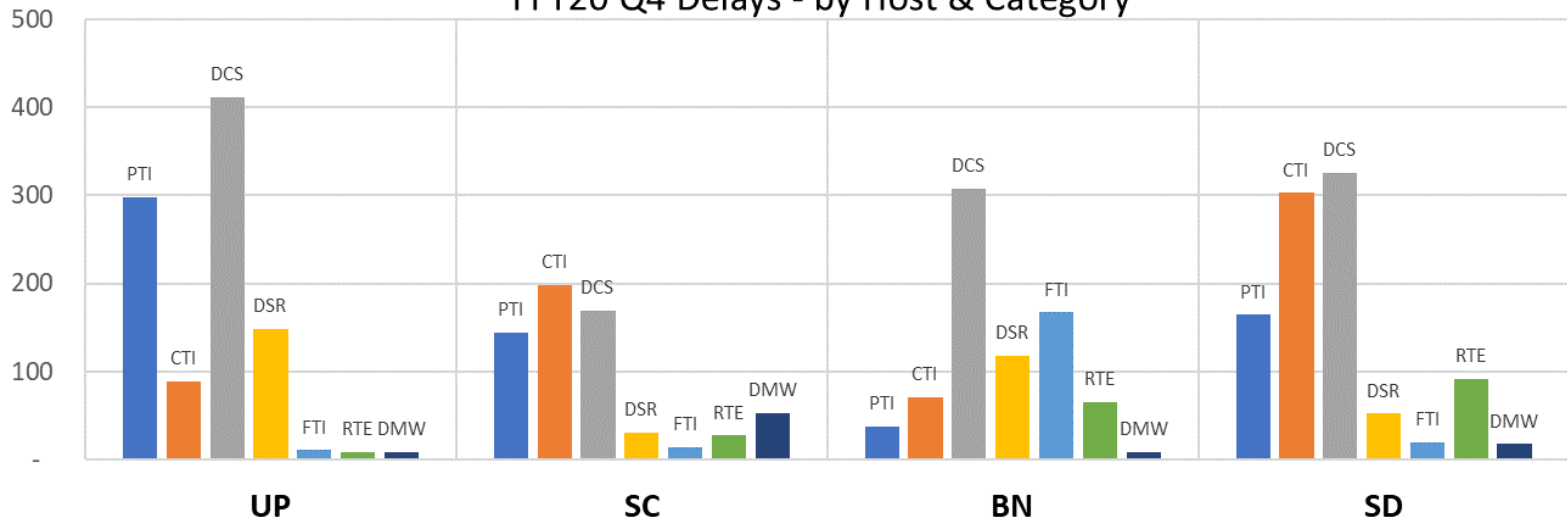


# Host Responsible Delays per 10K Train Miles

By Host (FFY19 Q4 v. FFY20 Q4)



FFY20 Q4 Delays - by Host & Category



# Conclusions – FFY20 Q4

- OTP continues to show improvement during COVID-19 reduced service schedule, with systemwide customer OTP performing above 90 percent for Q4.
- Amtrak, host, and third-party delay minutes per 10K train miles decreased by 61 percent, 36 percent, and four percent, respectively year over year.
- Overall, total minutes of delay per 10K train miles decreased by 43 percent in FFY20 Q4 v. FFY19 Q4.



# Questions



# Los Angeles-San Diego-San Luis Obispo Rail Corridor Agency

Capital Program Update  
Technical Advisory Committee  
May 6, 2021

# LOSSAN Capital Program

- The Los Angeles – San Diego – San Luis Obispo (LOSSAN) Rail Corridor Agency (Agency) Capital Program consists of projects that are either led by or helped funded by the LOSSAN Agency through various funding programs or awarded grants.
- The Capital Program does not include corridor projects that are being led and funded by other member or partner agencies.

# Capital Projects

Project	Estimated Cost	Project	Estimated Cost
Central Coast Layover Facility Expansion (Phase 1)	\$26.2M	Leesdale Siding Upgrade and Extension / Oxnard Second Platform	\$46.9M
Interim San Luis Obispo Layover Facility Expansion	\$1.6M	Camarillo Station Improvements	\$6.9M
Centralized Traffic Control (CTC) / Powered Sidings	\$29.2M	Seacliff Siding Extension	\$20.5M
Bridge Replacements / Infrastructure Enhancements	\$86.0M	Various Corridor Optimization, Passenger Amenity Upgrades, and Facility Improvements	\$3.8M
Santa Barbara Subdivision Corridor Hardening Improvements / Safety Improvements	\$9.4M	San Diego Signal Respacing and Optimization Improvements	\$15.9M
Goleta Layover Facility Expansion	\$10.1M	North San Diego County Fencing Project	\$1.3M
Carpinteria Second Track and Platform	\$42.0M	San Diego County Maintenance and Layover Facility (Phase 1)	\$28.4M
<b>TOTAL CAPITAL PROGRAM</b>		<b>\$328.2M</b>	

# Capital Project Update

- Several projects are underway and in various stages of design or construction

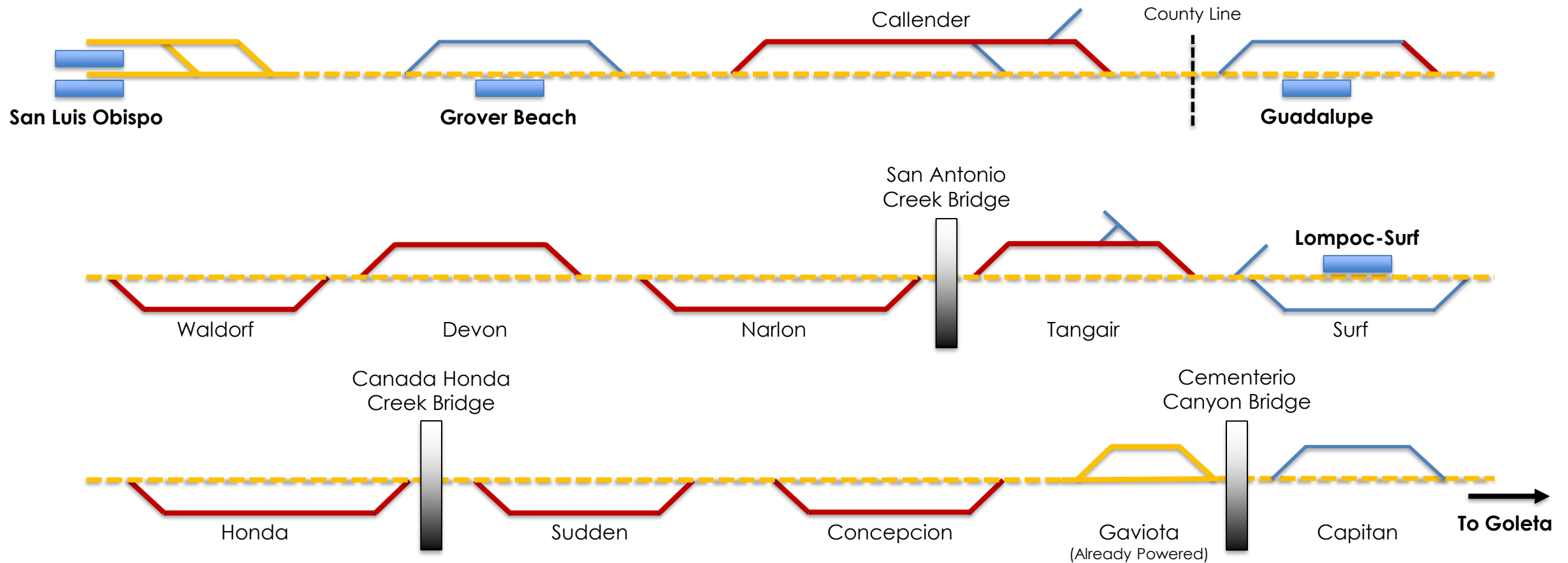
Project	Phase
CTC / Powered Sidings	Construction
Goleta Layover Facility Expansion	Design
Bridge Replacements / Infrastructure Enhancements	Design / Construction
Central Coast Layover Facility Expansion (Phase 1)	PAED
Interim San Luis Obispo Layover Facility Expansion	Design
San Diego County Maintenance and Layover Facility (Phase 1)	PAED

# Capital Project Update

- **Santa Barbara Subdivision Capital Improvements**
  - Design and installation of CTC between Goleta and San Luis Obispo
    - First 20.3 miles from Ellwood siding to Gaviota siding activated on January 18, 2021
    - Next 14.7 miles from Gaviota siding to Concepcion siding planned for activation middle of March 2021
  - Powering of eight (8) siding sidings between Goleta and San Luis Obispo
  - Replacement of three (3) bridges between Goleta and San Luis Obispo
    - Construction of Narlon Bridge (San Antonio Creek) underway and scheduled for completion summer of 2021
    - Environmental / design for Canada Honda Creek Bridge to begin spring of 2021
  - Tie and Rail Replacement (70+ years old) between Goleta and San Luis Obispo (to be substantially complete by end of March 2021)
  - Various corridor hardening and safety improvements

# Capital Project Update

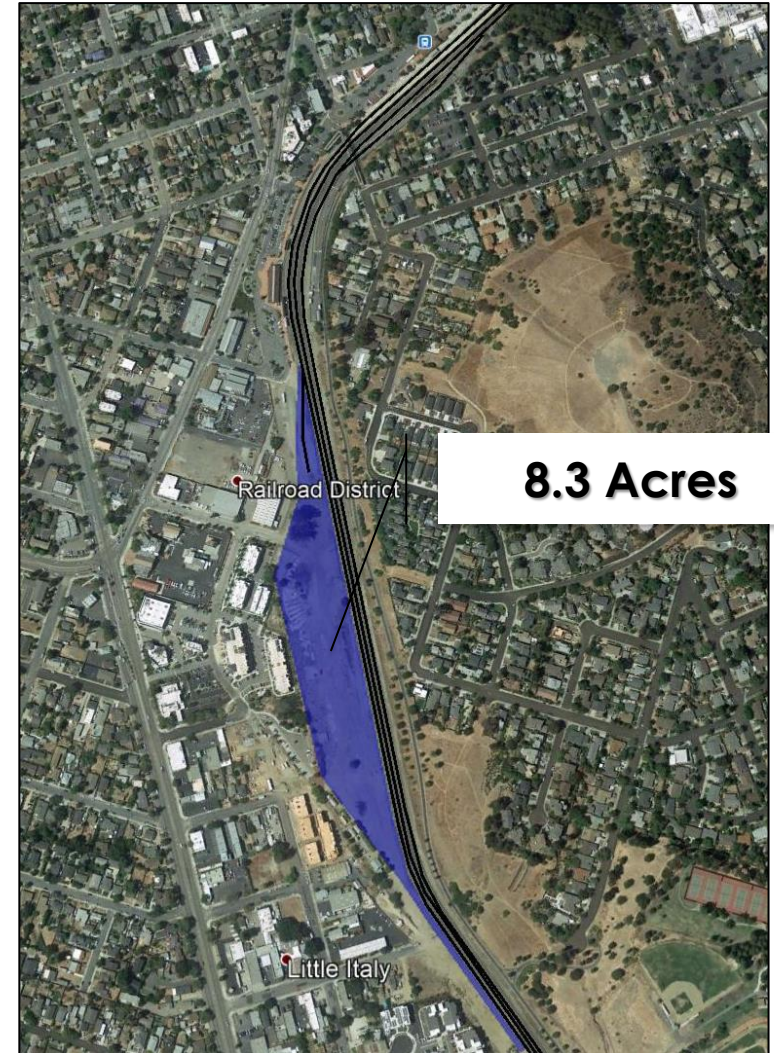
## Summary of Santa Barbara Subdivision Capital Improvements





# Capital Project Update

- **Central Coast Layover Facility**
  - 10% design reviewed by Union Pacific – proceeding with 25%
  - Draft environmental technical studies being prepared
  - Master Site Plan finalized after addressing comments from local stakeholders
  - Public scoping meeting held on March 10 in conjunction with City Planning Commission presentation





# Capital Project Update

## Central Coast Layover Facility Design Concept

- Capacity to store up to five trainsets
- Support servicing and light maintenance of Pacific Surfliner on north end of corridor
- Preserves railroad heritage of site



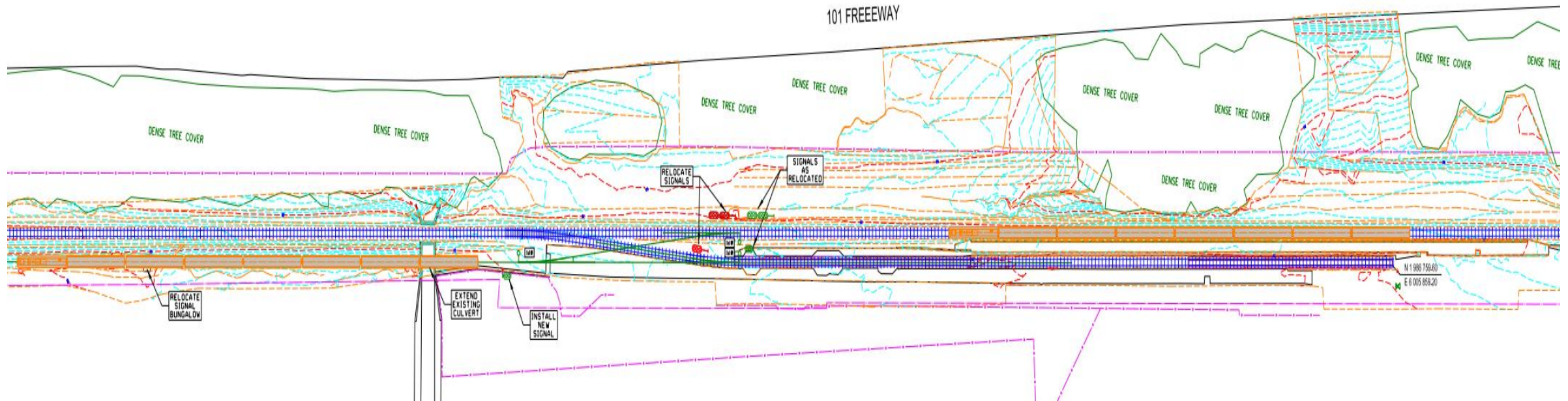
# Capital Project Update

- Goleta Layover Facility Expansion
  - Design work order executed through Amtrak
  - Project will design and construct expansion allowing one additional trainset to layover
  - Second storage track will be located to the west (or north) of existing station
  - Design concept has been reviewed by Union Pacific Railroad
  - Proceeding into 60% design



# Capital Project Update

## Goleta Layover Facility Expansion Design Concept

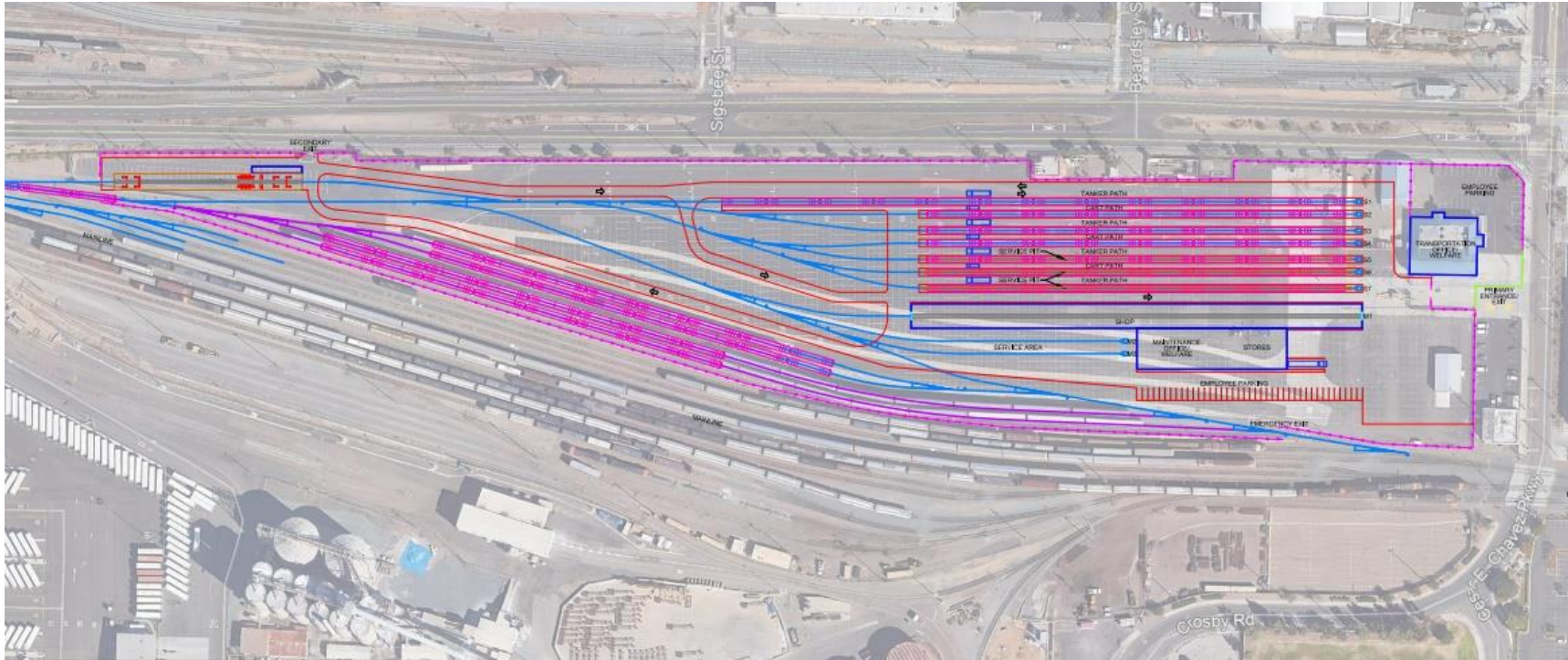


# Capital Project Update

- San Diego County Maintenance and Layover Facility
  - Site selection study completed in December 2020
  - Preferred location identified on existing BNSF Railway (BNSF) freight yard
  - Continuing coordination and negotiation with BNSF regarding site use
  - Released RFP for PAED phase of project at February 16, 2021 LOSSAN Board meeting.
  - Award of contract anticipated at May 2021 Board meeting with NTP in summer 2021.

# Capital Project Update

## San Diego County Maintenance and Layover Facility Design Concept



- Capacity to store up to seven revenue trainsets
- Primary maintenance and servicing facility for Pacific Surfliner

# Current Project Funding

- TIRCP - \$155.4M
- Proposition 1B Intercity Rail (Prop 1B) - \$35.0M
- State Rail Assistance (SRA) - \$14.6M
- State Transportation Improvement Program (STIP) - \$12.5M

**Awarded Eligible Project Funding - \$217.5M**

**Remaining Funds Necessary - \$110.7M**

Note: Total awarded project funding does not include completed SANDAG led projects or various incentive programs.



# Unfunded or Partially Funded Projects

Project	Estimated Cost	Funded Amount	Unfunded Amount
Cementerio Canyon Bridge Replacement	\$18.0M	\$0	\$18.0M
Carpinteria Second Track and Platform	\$42.0M	\$10.6M	\$31.4M
Leesdale Siding Upgrade and Extension / Oxnard Second Platform *	\$46.9M	\$0	\$46.9M
Seacliff Siding Extension	\$20.5M	\$0	\$20.5M
Santa Barbara Subdivision Corridor Hardening Improvements / Safety Improvements	\$9.4M	\$3.5M	\$5.9M **
<b>TOTAL CAPITAL PROGRAM FUNDING</b>	<b>\$136.8M</b>	<b>\$14.1M</b>	<b>\$122.7M</b>

\* Project can be funded and constructed in phases.

\*\* Round 2 of SRA formula funding is programmed for this project, but funding has not yet been received from CalSTA.



# Questions?

**Proposed June/July 2021  
Pacific Surfliner Schedule**

<b>Southbound WEEKDAY</b> <i>Service Recovery - 9RT-4RT-1RT</i>	<b>562</b> Daily	<b>564</b> Mo-Fr	<b>768</b> Daily	<b>572</b> Mo-Fr	<b>774</b> Daily	<b>580</b> Daily	<b>784</b> Mo-Fr	<b>590</b> Daily	<b>11</b> Daily	<b>796</b> Daily
San Luis Obispo, CA	---	---	---	---	6:55 AM	---	---	---	3:20 PM	---
Grover Beach, CA	---	---	---	---	7:15 AM	---	---	---	---	---
Guadalupe, CA	---	---	---	---	7:31 AM	---	---	---	---	---
Lompoc-Surf Station, CA	---	---	---	---	8:05 AM	---	---	---	---	---
Goleta, CA	---	---	6:35 AM	---	9:13 AM	---	1:43 PM	---	---	6:48 PM
Santa Barbara, CA	---	---	6:46 AM	---	9:24 AM	---	1:55 PM	---	---	6:59 PM
	---	---	6:49 AM	---	9:27 AM	---	1:58 PM	---	6:02 PM	7:02 PM
Carpinteria, CA	---	---	7:04 AM	---	9:42 AM	---	2:15 PM	---	---	7:18 PM
Ventura, CA	---	---	7:29 AM	---	10:04 AM	---	2:41 PM	---	---	7:40 PM
Oxnard, CA	---	---	7:43 AM	---	10:18 AM	---	3:00 PM	---	7:05 PM	7:54 PM
Camarillo, CA	---	---	7:54 AM	---	10:35 AM	---	3:15 PM	---	---	---
Moorpark, CA	---	---	8:08 AM	---	---	---	3:30 PM	---	---	---
Simi Valley, CA	---	---	8:23 AM	---	11:02 AM	---	3:50 PM	---	7:48 PM	8:39 PM
Chatsworth, CA	---	---	8:40 AM	---	11:14 AM	---	4:11 PM	---	---	8:51 PM
Van Nuys, CA	---	---	8:56 AM	---	11:28 AM	---	4:24 PM	---	8:22 PM	9:07 PM
Burbank-Bob Hope Airport, CA	---	---	9:04 AM	---	11:35 AM	---	4:33 PM	---	8:31 PM	9:14 PM
Glendale, CA	---	---	9:16 AM	---	11:45 AM	---	4:44 PM	---	---	9:24 PM
Los Angeles, CA	---	---	9:35 AM	---	12:15 PM	---	4:55 PM	---	9:00 PM	9:48 PM
	6:05 AM	7:02 AM	9:55 AM	10:54 AM	12:33 PM	2:58 PM	5:15 PM	7:30 PM	---	10:22 PM
Fullerton, CA	6:36 AM	7:33 AM	10:26 AM	11:25 AM	1:04 PM	3:29 PM	5:47 PM	8:01 PM	---	10:53 PM
Anaheim, CA	6:45 AM	7:41 AM	10:34 AM	11:33 AM	1:12 PM	3:37 PM	5:56 PM	8:09 PM	---	11:01 PM
Santa Ana, CA	6:55 AM	7:49 AM	10:43 AM	11:42 AM	1:21 PM	3:46 PM	6:05 PM	8:18 PM	---	11:10 PM
Irvine, CA	7:08 AM	8:02 AM	10:54 AM	11:55 AM	1:34 PM	3:59 PM	6:18 PM	8:31 PM	---	11:21 PM
San Juan Capistrano, CA	7:23 AM	8:22 AM	11:09 AM	12:15 PM	1:49 PM	4:14 PM	6:32 PM	8:47 PM	---	11:36 PM
San Clemente Pier, CA	---	---	11:22 AM	---	---	---	---	---	---	---
Oceanside, CA	8:02 AM	8:55 AM	11:47 AM	12:52 PM	2:24 PM	4:52 PM	7:06 PM	9:20 PM	---	12:10 AM
Solana Beach, CA	8:18 AM	9:14 AM	12:08 PM	1:08 PM	2:43 PM	5:13 PM	7:23 PM	9:44 PM	---	12:26 AM
San Diego, CA (Old Town)	L 8:50 AM	L 9:46 AM	L 12:36 PM	L 1:40 PM	L 3:14 PM	L 5:42 PM	L 7:53 PM	L 10:12 PM	---	L 12:54 AM
San Diego, CA	8:58 AM	10:01 AM	12:50 PM	1:52 PM	3:28 PM	5:50 PM	8:09 PM	10:25 PM	---	1:15 AM

<b>Northbound WEEKDAY</b> <i>Service Recovery - 9RT-4RT-1RT</i>	<b>763</b> Daily	<b>14</b> Daily	<b>567</b> Mo-Fr	<b>769</b> Daily	<b>777</b> Daily	<b>579</b> Daily	<b>583</b> Daily	<b>785</b> Daily	<b>593</b> Daily	<b>595</b> Daily
San Diego, CA	5:55 AM	---	8:25 AM	9:43 AM	12:05 PM	1:35 PM	2:50 PM	3:58 PM	6:40 PM	8:57 PM
San Diego, CA (Old Town)	6:02 AM	---	8:32 AM	9:50 AM	12:12 PM	1:42 PM	2:57 PM	4:05 PM	6:47 PM	9:04 PM
Solana Beach, CA	6:33 AM	---	9:02 AM	10:23 AM	12:43 PM	2:16 PM	3:31 PM	4:36 PM	7:22 PM	9:35 PM
Oceanside, CA	6:57 AM	---	9:23 AM	10:40 AM	1:00 PM	2:36 PM	3:48 PM	4:53 PM	7:40 PM	9:53 PM
San Clemente Pier, CA	---	---	---	---	---	---	4:10 PM	5:19 PM	---	---
San Juan Capistrano, CA	7:30 AM	---	10:01 AM	11:20 AM	1:33 PM	3:08 PM	4:25 PM	5:34 PM	8:15 PM	10:26 PM
Irvine, CA	7:48 AM	---	10:16 AM	11:34 AM	1:48 PM	3:23 PM	4:42 PM	5:49 PM	8:30 PM	10:41 PM
Santa Ana, CA	7:59 AM	---	10:27 AM	11:45 AM	1:59 PM	3:34 PM	4:55 PM	6:00 PM	8:42 PM	10:52 PM
Anaheim, CA	8:08 AM	---	10:36 AM	11:54 AM	2:08 PM	3:43 PM	5:05 PM	6:10 PM	8:52 PM	11:01 PM
Fullerton, CA	8:16 AM	---	10:45 AM	12:02 PM	2:16 PM	3:52 PM	5:17 PM	6:20 PM	9:01 PM	11:10 PM
Los Angeles, CA	8:51 AM	---	11:25 AM	12:38 PM	2:51 PM	4:36 PM	5:54 PM	6:57 PM	9:39 PM	11:50 PM
	9:11 AM	10:10 AM	---	1:08 PM	3:06 PM	---	---	7:16 PM	---	---
Glendale, CA	9:23 AM	---	---	1:21 PM	3:18 PM	---	---	7:28 PM	---	---
Burbank-Bob Hope Airport, CA	9:33 AM	10:29 AM	---	1:35 PM	3:28 PM	---	---	7:38 PM	---	---
Van Nuys, CA	9:43 AM	10:40 AM	---	1:46 PM	3:38 PM	---	---	7:48 PM	---	---
Chatsworth, CA	9:55 AM	---	---	2:00 PM	3:50 PM	---	---	8:00 PM	---	---
Simi Valley, CA	10:07 AM	11:11 AM	---	2:17 PM	4:02 PM	---	---	8:12 PM	---	---
Moorpark, CA	---	---	---	2:30 PM	---	---	---	---	---	---
Camarillo, CA	10:31 AM	---	---	2:45 PM	4:28 PM	---	---	8:36 PM	---	---
Oxnard, CA	10:44 AM	11:44 AM	---	3:05 PM	4:39 PM	---	---	8:47 PM	---	---
Ventura, CA	11:00 AM	---	---	3:20 PM	4:58 PM	---	---	9:01 PM	---	---
Carpinteria, CA	11:22 AM	---	---	3:45 PM	5:22 PM	---	---	9:23 PM	---	---
Santa Barbara, CA	L 11:41 AM	---	---	L 3:59 PM	L 5:41 PM	---	---	L 9:51 PM	---	---
	11:44 AM	12:40 PM	---	4:02 PM	5:44 PM	---	---	9:54 PM	---	---
Goleta, CA	11:56 AM	---	---	4:17 PM	5:56 PM	---	---	10:04 PM	---	---
Lompoc-Surf Station, CA	---	---	---	---	7:02 PM	---	---	---	---	---
Guadalupe, CA	---	---	---	---	7:38 PM	---	---	---	---	---
Grover Beach, CA	---	---	---	---	7:55 PM	---	---	---	---	---
San Luis Obispo, CA	---	3:35 PM	---	---	8:36 PM	---	---	---	---	---

**Proposed June/July 2021  
Pacific Surfliner Schedule**

<b>Southbound WEEKEND</b>	<b>562</b>	<b>1564</b>	<b>768</b>	<b>1572</b>	<b>774</b>	<b>580</b>	<b>1784</b>	<b>590</b>	<b>11</b>	<b>796</b>
<i>Service Recovery - 9RT-4RT-1RT</i>	Daily	SaSuHo	Daily	SaSuHo	Daily	Daily	SaSuHo	Daily	Daily	Daily
San Luis Obispo, CA	---	---	---	---	6:55 AM	---	---	---	3:20 PM	---
Grover Beach, CA	---	---	---	---	7:15 AM	---	---	---	---	---
Guadalupe, CA	---	---	---	---	7:31 AM	---	---	---	---	---
Lompoc-Surf Station, CA	---	---	---	---	8:05 AM	---	---	---	---	---
Goleta, CA	---	---	6:35 AM	---	9:13 AM	---	1:43 PM	---	---	6:48 PM
Santa Barbara, CA	---	---	6:46 AM	---	9:24 AM	---	1:55 PM	---	---	6:59 PM
	---	---	6:49 AM	---	9:27 AM	---	1:58 PM	---	6:02 PM	7:02 PM
Carpinteria, CA	---	---	7:04 AM	---	9:42 AM	---	2:15 PM	---	---	7:18 PM
Ventura, CA	---	---	7:29 AM	---	10:04 AM	---	2:41 PM	---	---	7:40 PM
Oxnard, CA	---	---	7:43 AM	---	10:18 AM	---	3:00 PM	---	7:05 PM	7:54 PM
Camarillo, CA	---	---	7:54 AM	---	10:35 AM	---	3:15 PM	---	---	---
Moorpark, CA	---	---	8:08 AM	---	---	---	3:30 PM	---	---	---
Simi Valley, CA	---	---	8:23 AM	---	11:02 AM	---	3:50 PM	---	7:48 PM	8:39 PM
Chatsworth, CA	---	---	8:40 AM	---	11:14 AM	---	4:11 PM	---	---	8:51 PM
Van Nuys, CA	---	---	8:56 AM	---	11:28 AM	---	4:24 PM	---	8:22 PM	9:07 PM
Burbank-Bob Hope Airport, CA	---	---	9:04 AM	---	11:35 AM	---	4:33 PM	---	8:31 PM	9:14 PM
Glendale, CA	---	---	9:16 AM	---	11:45 AM	---	4:44 PM	---	---	9:24 PM
Los Angeles, CA	---	---	9:35 AM	---	12:15 PM	---	4:55 PM	---	9:00 PM	9:48 PM
	6:05 AM	6:52 AM	9:55 AM	11:20 AM	12:33 PM	2:58 PM	5:15 PM	7:30 PM	---	10:22 PM
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Santa Ana, CA	6:55 AM	7:40 AM	10:43 AM	12:08 PM	1:21 PM	3:46 PM	6:05 PM	8:18 PM	---	11:10 PM
Irvine, CA	7:08 AM	7:53 AM	10:54 AM	12:21 PM	1:34 PM	3:59 PM	6:18 PM	8:31 PM	---	11:21 PM
San Juan Capistrano, CA	7:23 AM	8:09 AM	11:09 AM	12:41 PM	1:49 PM	4:14 PM	6:32 PM	8:47 PM	---	11:36 PM
San Clemente Pier, CA	---	---	11:22 AM	---	---	---	---	---	---	---
Oceanside, CA	8:02 AM	8:42 AM	11:47 AM	1:15 PM	2:24 PM	4:52 PM	7:06 PM	9:20 PM	---	12:10 AM
Solana Beach, CA	8:18 AM	9:01 AM	12:08 PM	1:31 PM	2:43 PM	5:13 PM	7:20 PM	9:44 PM	---	12:26 AM
San Diego, CA (Old Town)	L 8:50 AM	L 9:34 AM	L 12:36 PM	L 2:03 PM	L 3:14 PM	L 5:42 PM	L 7:57 PM	L 10:12 PM	---	L 12:54 AM
San Diego, CA	8:58 AM	9:48 AM	12:50 PM	2:13 PM	3:28 PM	5:50 PM	8:14 PM	10:25 PM	---	1:15 AM

<b>Northbound WEEKEND</b>	<b>763</b>	<b>14</b>	<b>1567</b>	<b>769</b>	<b>777</b>	<b>579</b>	<b>583</b>	<b>785</b>	<b>593</b>	<b>595</b>
<i>Service Recovery - 9RT-4RT-1RT</i>	Daily	Daily	SaSuHo	Daily	Daily	Daily	Daily	Daily	Daily	Daily
San Diego, CA	5:55 AM	---	8:05 AM	9:43 AM	12:05 PM	1:35 PM	2:50 PM	3:58 PM	6:40 PM	8:57 PM
San Diego, CA (Old Town)	6:02 AM	---	8:12 AM	9:50 AM	12:12 PM	1:42 PM	2:57 PM	4:05 PM	6:47 PM	9:04 PM
Solana Beach, CA	6:33 AM	---	8:44 AM	10:23 AM	12:43 PM	2:16 PM	3:31 PM	4:36 PM	7:22 PM	9:35 PM
Oceanside, CA	6:57 AM	---	9:06 AM	10:40 AM	1:00 PM	2:36 PM	3:48 PM	4:53 PM	7:40 PM	9:53 PM
San Clemente Pier, CA	---	---	---	---	---	---	4:10 PM	5:19 PM	---	---
San Juan Capistrano, CA	7:30 AM	---	9:42 AM	11:20 AM	1:33 PM	3:08 PM	4:25 PM	5:34 PM	8:15 PM	10:26 PM
Irvine, CA	7:48 AM	---	9:57 AM	11:34 AM	1:48 PM	3:23 PM	4:42 PM	5:49 PM	8:30 PM	10:41 PM
Santa Ana, CA	7:59 AM	---	10:08 AM	11:45 AM	1:59 PM	3:34 PM	4:55 PM	6:00 PM	8:42 PM	10:52 PM
Anaheim, CA	8:08 AM	---	10:17 AM	11:54 AM	2:08 PM	3:43 PM	5:05 PM	6:10 PM	8:52 PM	11:01 PM
Fullerton, CA	8:16 AM	---	10:26 AM	12:02 PM	2:16 PM	3:52 PM	5:17 PM	6:20 PM	9:01 PM	11:10 PM
Los Angeles, CA	8:51 AM	---	11:06 AM	12:38 PM	2:51 PM	4:36 PM	5:54 PM	6:57 PM	9:39 PM	11:50 PM
	9:11 AM	10:10 AM	---	1:08 PM	3:06 PM	---	---	7:16 PM	---	---
Glendale, CA	9:23 AM	---	---	1:21 PM	3:18 PM	---	---	7:28 PM	---	---
Burbank-Bob Hope Airport, CA	9:33 AM	10:29 AM	---	1:35 PM	3:28 PM	---	---	7:38 PM	---	---
Van Nuys, CA	9:43 AM	10:40 AM	---	1:46 PM	3:38 PM	---	---	7:48 PM	---	---
Chatsworth, CA	9:55 AM	---	---	2:00 PM	3:50 PM	---	---	8:00 PM	---	---
Simi Valley, CA	10:07 AM	11:11 AM	---	2:17 PM	4:02 PM	---	---	8:12 PM	---	---
Moorpark, CA	---	---	---	2:30 PM	---	---	---	---	---	---
Camarillo, CA	10:31 AM	---	---	2:45 PM	4:28 PM	---	---	8:36 PM	---	---
Oxnard, CA	10:44 AM	11:44 AM	---	3:05 PM	4:39 PM	---	---	8:47 PM	---	---
Ventura, CA	11:00 AM	---	---	3:20 PM	4:58 PM	---	---	9:01 PM	---	---
Carpinteria, CA	11:22 AM	---	---	3:45 PM	5:22 PM	---	---	9:23 PM	---	---
Santa Barbara, CA	L 11:41 AM	---	---	L 3:59 PM	L 5:41 PM	---	---	L 9:51 PM	---	---
	11:44 AM	12:40 PM	---	4:02 PM	5:44 PM	---	---	9:54 PM	---	---
Goleta, CA	11:56 AM	---	---	4:17 PM	5:56 PM	---	---	10:04 PM	---	---
Lompoc-Surf Station, CA	---	---	---	---	7:02 PM	---	---	---	---	---
Guadalupe, CA	---	---	---	---	7:38 PM	---	---	---	---	---
Grover Beach, CA	---	---	---	---	7:55 PM	---	---	---	---	---
San Luis Obispo, CA	---	3:35 PM	---	---	8:36 PM	---	---	---	---	---



# LOSSAN BOARD OF DIRECTORS CALENDAR

## 2021 Board and Committee Meetings and Holidays

JANUARY						
SUN	MON	TUE	WED	THU	FRI	SAT
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

FEBRUARY						
SUN	MON	TUE	WED	THU	FRI	SAT
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

MARCH						
SUN	MON	TUE	WED	THU	FRI	SAT
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

APRIL						
SUN	MON	TUE	WED	THU	FRI	SAT
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

MAY						
SUN	MON	TUE	WED	THU	FRI	SAT
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

JUNE						
SUN	MON	TUE	WED	THU	FRI	SAT
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

JULY						
SUN	MON	TUE	WED	THU	FRI	SAT
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

AUGUST						
SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

SEPTEMBER						
SUN	MON	TUE	WED	THU	FRI	SAT
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

OCTOBER						
SUN	MON	TUE	WED	THU	FRI	SAT
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

NOVEMBER						
SUN	MON	TUE	WED	THU	FRI	SAT
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

DECEMBER						
SUN	MON	TUE	WED	THU	FRI	SAT
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

LOSSAN Board of Directors regular meeting

11:15 a.m. - 12:45 p.m.

Meetings will take place at the OCTA headquarters unless otherwise noted

Executive Committee

9:00 a.m. - 10:30 a.m.

Technical Advisory Committee

12:30 p.m. - 2:30 p.m.

LOSSAN Agency Observed Holidays

# LOSSAN

Los Angeles  
San Diego  
San Luis Obispo  
Coastal Rail Corridor  
San Diego Segment



## SD-LOSSAN Regional Rail Corridor Improvements Study Update

LOSSAN Technical Advisory Committee | May 6, 2021

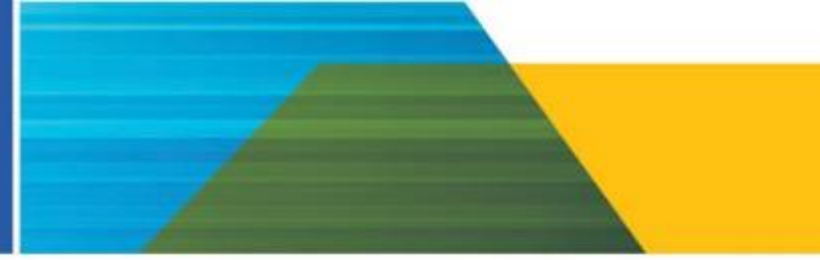
[KeepSanDiegoMoving.com](https://www.KeepSanDiegoMoving.com)

# 1 Del Mar Bluffs Background



# Del Mar Bluffs

## Landslide at MP 245.2 – 2/28/2021



Before



After





# Del Mar Bluffs

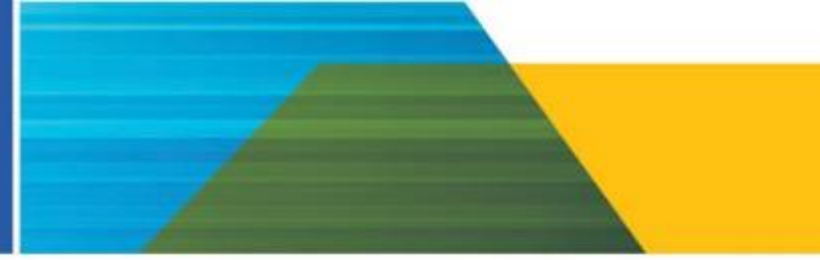
## Landslide at MP 245.2 – 2/28/2021





# Del Mar Bluffs

## AWW#1 – 03/13-14: Temp. Grading





# Del Mar Bluffs

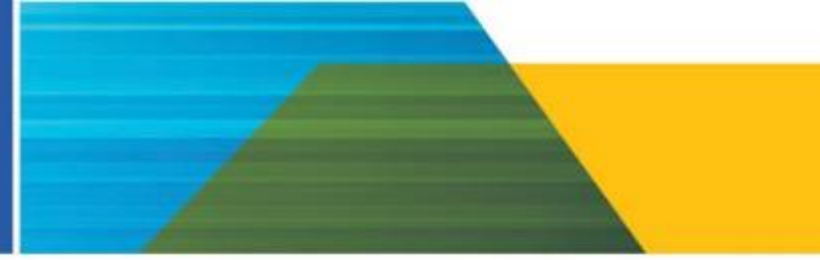
## AWW#3 – 04/10-12: Pile Installation





# Del Mar Bluffs

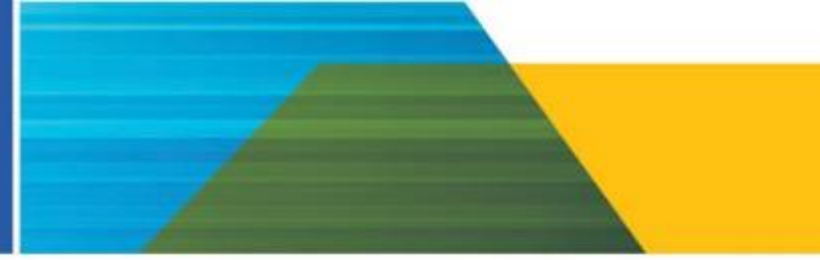
## AWW#3 – 04/10-12: Pile Installation





# Del Mar Bluffs

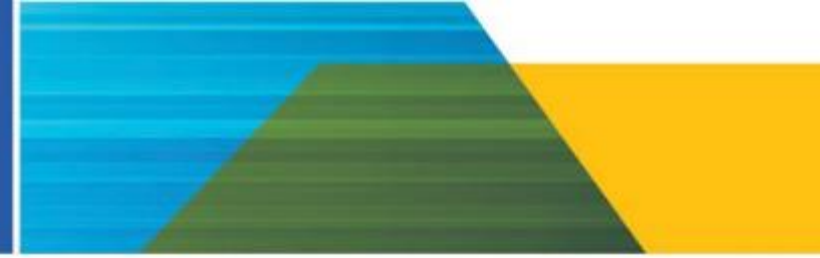
## AWW#5 – 04/23-25 Tie-back installation



# 2 Study Background



# Los Angeles – San Diego – San Luis Obispo (LOSSAN) Rail Corridor



- Nation's second busiest intercity rail corridor behind the Northeast Corridor (8 million riders annually)
- Approximately \$1 billion in goods carried
- San Diego Subdivision is the southernmost 60.1 miles in San Diego County
- Owned by NCTD and MTS
- Part of Strategic Rail Corridor Network (STRACNET)
- More than \$1 billion identified for capital improvements (mainly capacity)





# Expected Study Results

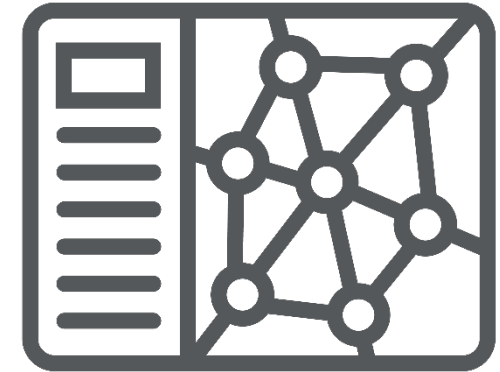
The study will result in:



**Alternative Alignments**



**Proposed Improvements**



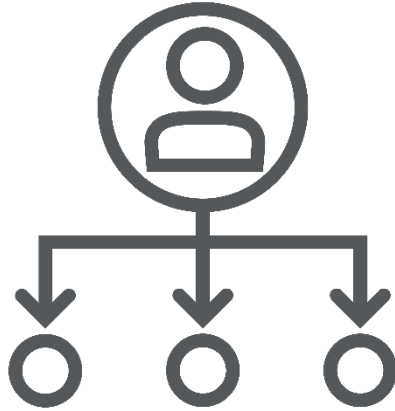
**Supporting Analysis for Passenger  
and Freight Rail Services**

**Consistent with the 5 Big Moves, recommended improvements will support future investments to reduce travel times, increase capacity, and enhance safety**

# Scope of Work

- Existing Conditions
- Corridor Resiliency
- Operational Feasibility –  
*Sorrento Mesa Branch Analysis*
- Basis of Design (Track)
- Basis of Design (Tunnel)
- Del Mar/Miramar Hill Alternatives Analysis
- Service Plans
- Corridor Wide Higher Speed Analysis
- Project Phasing/Implementation Plan
- Final Report

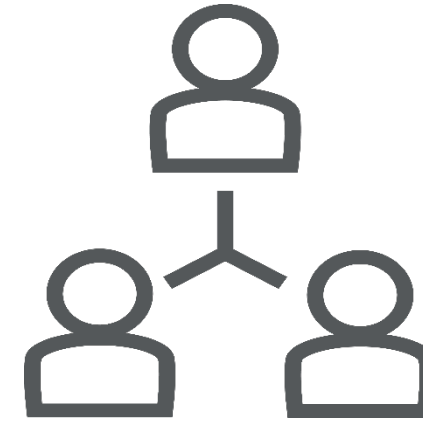
# Reporting Structure



## PROJECT DEVELOPMENT TEAM

SANDAG  
NCTD  
MTS  
LOSSAN

Metrolink  
BNSF Railway  
FRA  
Caltrans

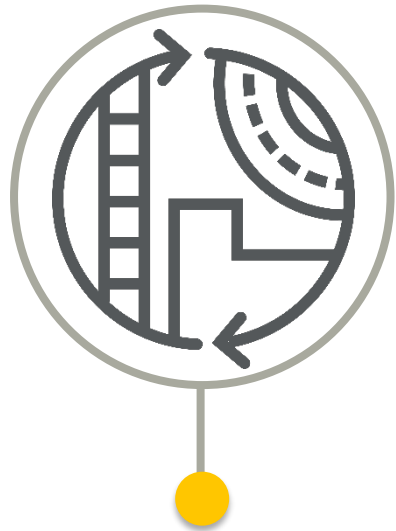


## EXECUTIVE LEADERSHIP TASK FORCE

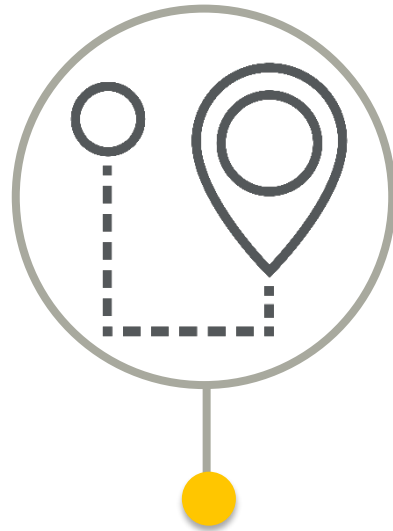
## SANDAG BOARD OF DIRECTORS

# 3 Operational Feasibility

# Objectives



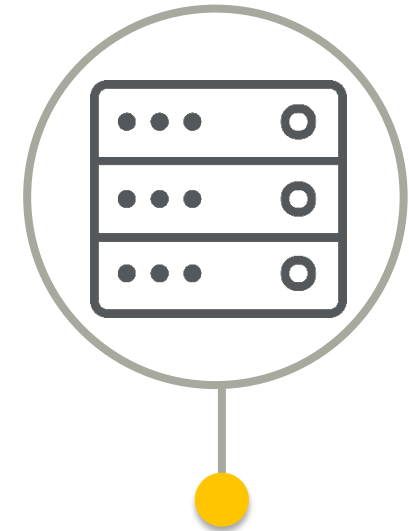
Evaluate technology, including higher speed diesel locomotives and electrification



Identify freight and passenger service acceleration within context of LOSSAN Optimization Study



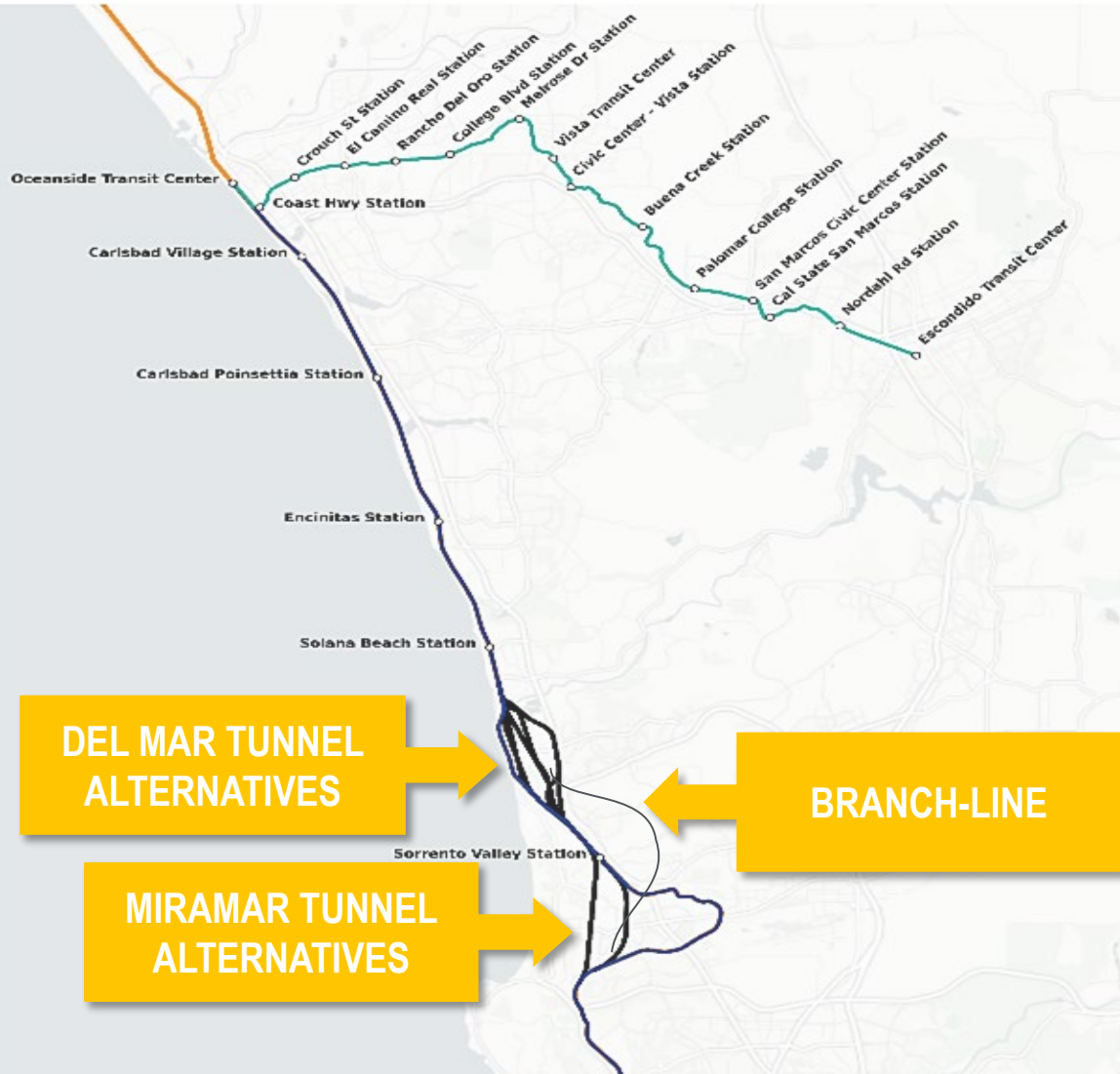
Assess changes to communications and signaling system and risks to current and near-term operations



Test a planning-level service concept for future service to proposed Sorrento Mesa Mobility Hub (in coordination with South Bay to Sorrento CMCP)

# Infrastructure Assumptions

SANDAG's Infrastructure Development Plan<sup>1</sup>



## New stations at

- Del Mar Events platform
- UTC/Nobel Station
- San Diego International Airport

Double track rail corridor from the County Line to Downtown San Diego. The preliminary results assume Del Mar and Miramar Hill tunnels

Upgraded line speeds to support 110 mph operations

(1) Also recommended in the LOSSAN Optimization Study

# Equipment Tested

## NEW DIESEL



### Key Parameters

Speed  
[mph]

Siemens Charger

125

Pacific Surfliner (Limited Stop) service

110

COASTER (All Stop) service

90

Operating speeds are limited by trailer car design speeds

## ZERO EMISSIONS



### Key Parameters

Speed  
[mph]

Stadler KISS

110



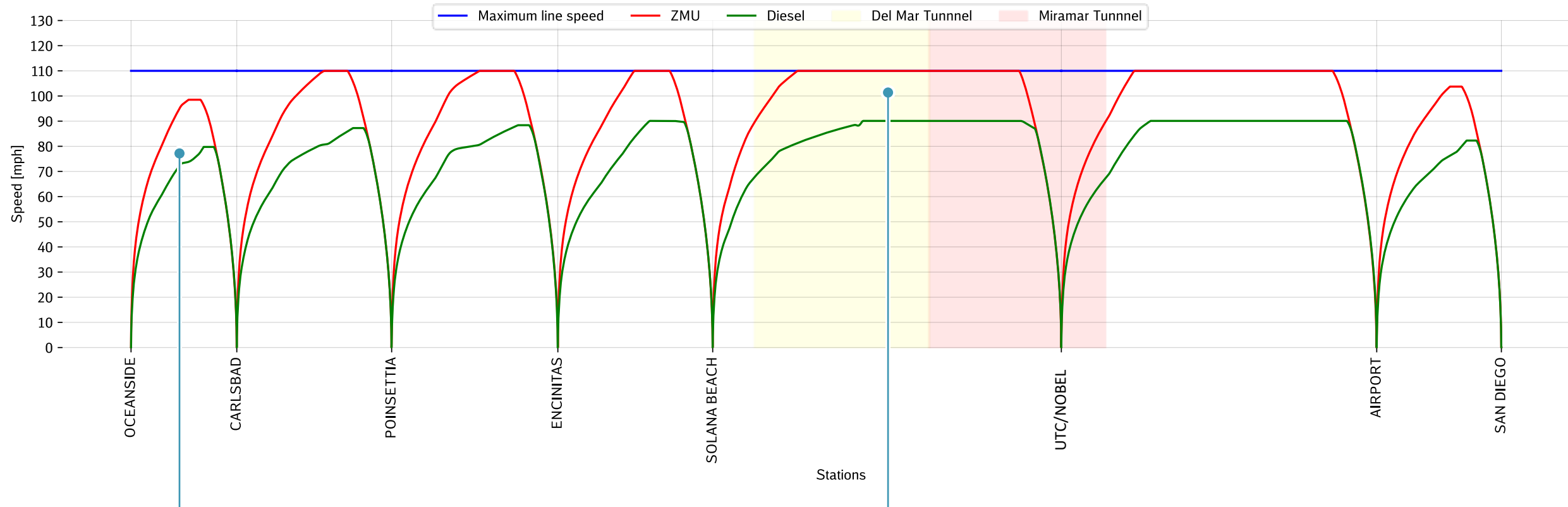
# Equipment Performance



## Oceanside to San Diego

## PRELIMINARY RESULTS

### All-stop service speed-distance diagram using Track Class 6 (110 mph)



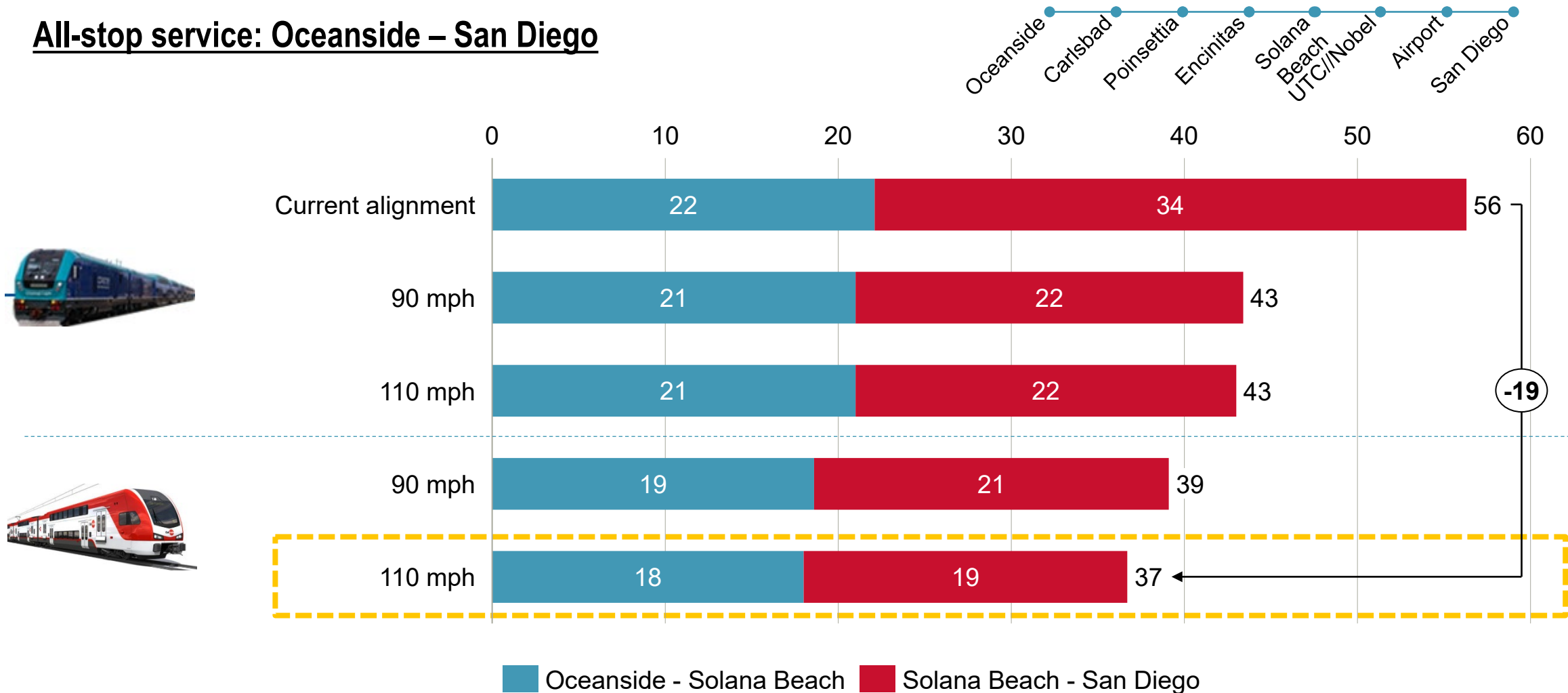
ZMU has better acceleration characteristics and performs better than diesel on gradients

ZMU can utilize maximum line speeds

# Preliminary Travel Time

(IN MINUTES)

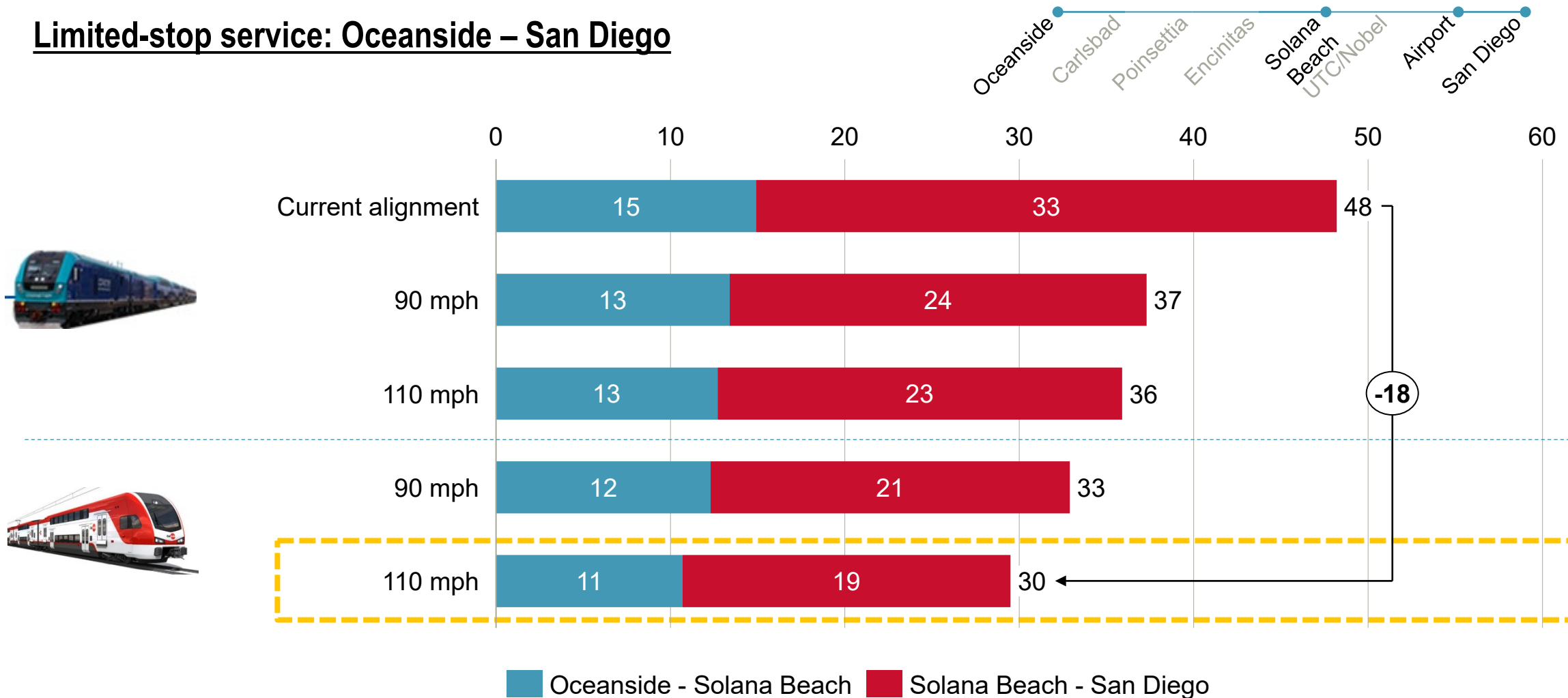
## All-stop service: Oceanside – San Diego



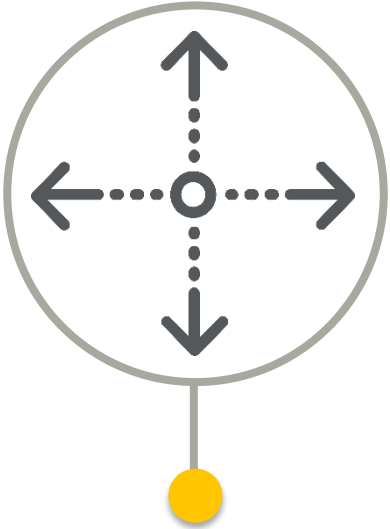
# Preliminary Travel Time

(IN MINUTES)

## Limited-stop service: Oceanside – San Diego



# Preliminary Operational Findings



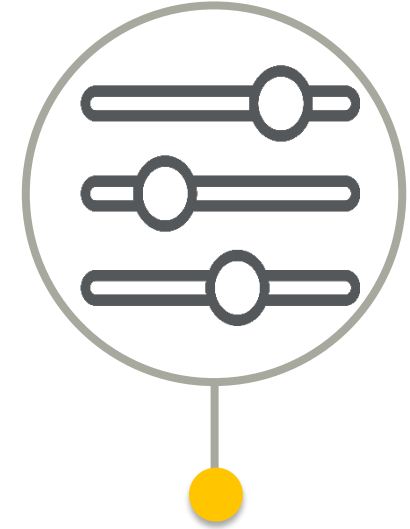
No measurable benefits for running 125 mph over 110mph due to station spacing



ZMU offers acceleration and braking benefits over diesel locomotive



Freight service safety concerns for running in shared corridor at more than 110 mph



Speed improvements in SD County highlight critical infrastructure constraints at San Clemente

**Existing fleet cannot operate beyond 90 mph due to coach restrictions**

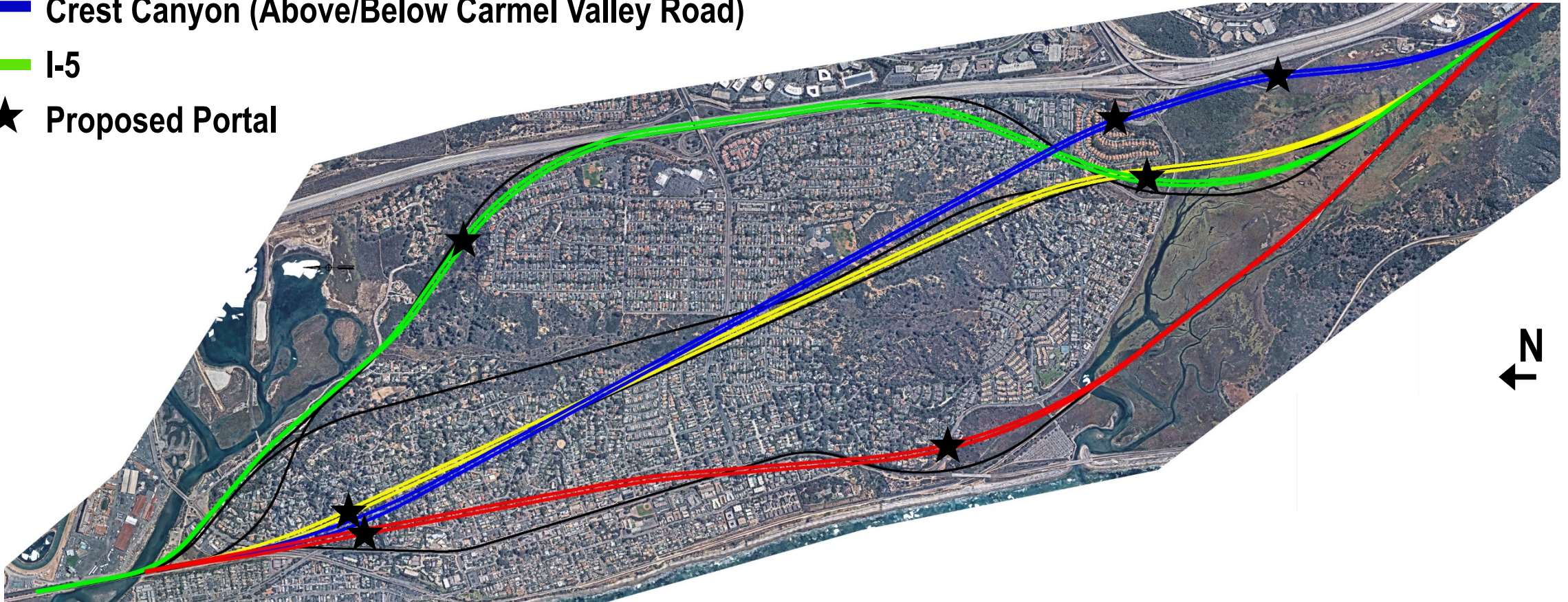
# **4 Realignment Alternatives Analysis**



# Del Mar Realignment

## REVISED ALTERNATIVES

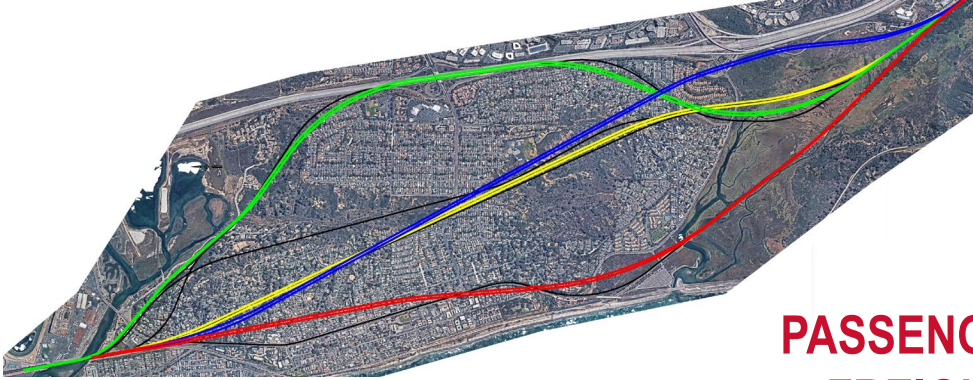
- Camino Del Mar
- Crest Canyon Higher Speed
- Crest Canyon (Above/Below Carmel Valley Road)
- I-5
- ★ Proposed Portal





# Del Mar Realignment

## REVISED ALTERNATIVES



### PASSENGER/ FREIGHT MAX SPEED (MPH)

#### ALIGNMENT

Today	90/60
<span style="color: red;">■</span> Camino Del Mar	110/60
<span style="color: yellow;">■</span> Crest Canyon Higher Speed	110/60
<span style="color: blue;">■</span> Crest Canyon (Above CVR)	110/60
<span style="color: blue;">■</span> Crest Canyon (Below CVR)	110/60
<span style="color: green;">■</span> I-5	80/60

### CAPITAL COSTS COMPARISONS

-
Base
+5%
+5%
+10%
+30%

### TRAVEL TIMES (MINUTES) Solana Beach to Old Town

#### All Stop

#### Limited Stop

#### Charger + 5 Coaches

#### ZMU

#### Charger + 7 Coaches

#### ZMU

31	-	32	-
28.2	26.9	27.3	25.2
28.2	26.9	27.4	25.2
28.2	26.9	27.4	25.2
28.2	26.9	27.4	25.2
29.6	28.9	28.6	27.3

# Del Mar Realignment

## REVISED EVALUATION CRITERIA



Evaluation Criteria	Weight (%)
<b>Travel Time</b>	<b>14</b>
Environmental Consequences	9
ROW Impacts and Acquisitions	6
<b>Connectivity and Travel Demand</b>	<b>13</b>
<b>Safety Improvements</b>	<b>15</b>
Constructability, Construction Impacts, and Duration	7
Capital Costs (includes construction, right-of-way, and design)	8
Railroad Operation Impacts (during construction)	5
Operational Complexity (post-construction)	9
<b>O&amp;M Costs</b>	<b>10</b>
Community Acceptance	4

# Del Mar Realignment

## REVISED COMPARATIVE ANALYSIS

Evaluation Criteria	Weight (%)	Camino Del Mar	Crest Canyon			I-5
			Higher Speed	Above Carmel Valley Rd.	Below Carmel Valley Rd.	
Travel Time	14	5	5	5	4	1
Environmental Consequences	9	1	4	4	3	2
ROW Impacts and Acquisitions	6	4	3	1	3	1
Connectivity and Travel Demand	13	3	3	3	3	2
Safety Improvements	15	5	5	5	4	5
Constructability, Construction Impacts, and Duration	7	2	4	1	2	1
Capital Costs (includes construction, right-of-way, and design)	8	5	4	3	2	1
Railroad Operation Impacts (during construction)	5	2	4	4	4	1
Operational Complexity (post-construction)	9	4	4	4	1	4
O&M Costs	10	2	3	3	1	2
Community Acceptance	4	2	3	1	3	1
Total Score		345	396	347	281	223

RATING 5 4 3 2 1  
Best ——— Worst

# Del Mar Realignment

## Preliminary Summary



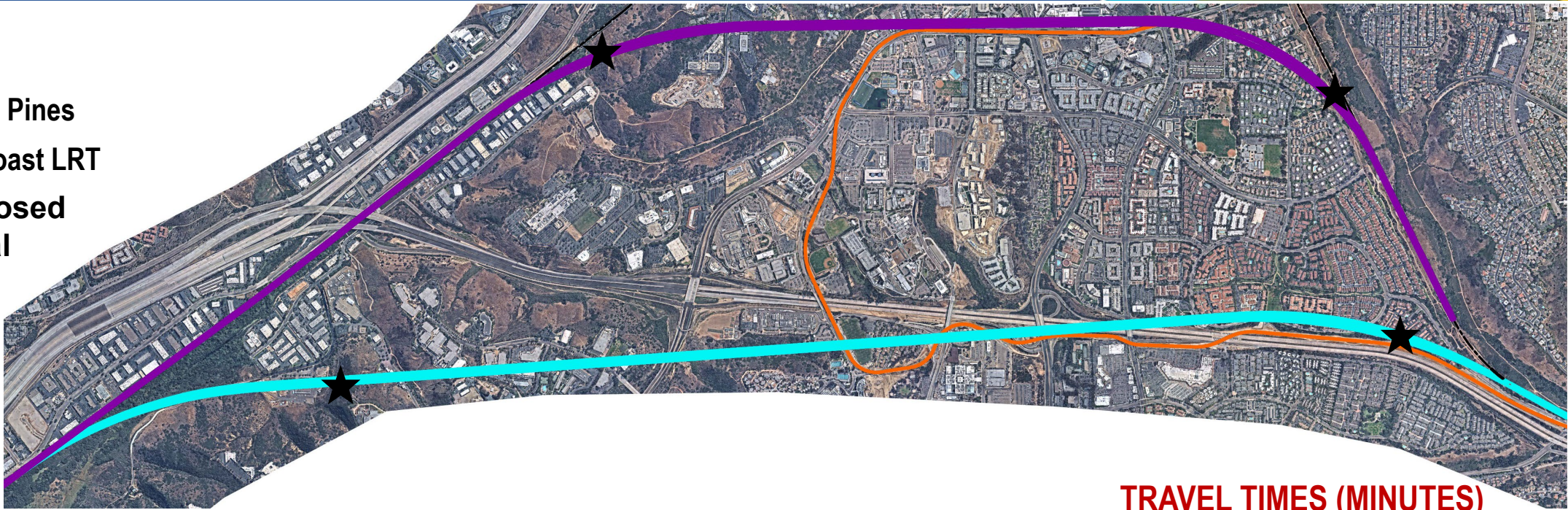
Issue Area	Camino Del Mar	Crest Canyon			I-5
		Higher Speed	Above Carmel Valley Road	Below Carmel Valley Road	
Total Cost	Base	+5%	+5%	+10%	+30%
Total Length (mi)	4.9	4.8	4.5	4.5	5
Tunnel Length (ft)	1.8	2.5	2.5	3.1	2.2
Tunnel Depth (ft)*	35 - 120	35 - 275	35 - 365	35 - 480	35 - 210
Elevated Structure (ft)	8,000	4,800	4,600	130	5,300
* top of tunnel to existing ground; minimum – maximum depth					



# Miramar Realignment

## REVISED ALTERNATIVES

- UTC
- Torrey Pines
- Mid Coast LRT
- ★ Proposed Portal



TRAVEL TIMES (MINUTES)  
Solana Beach to Old Town

ALIGNMENT	PASSENGER/ FREIGHT MAX SPEED (MPH)	CAPITAL COSTS COMPARISONS	All Stop				Limited Stop	
			Charger + 5 Coaches	ZMU	Charger + 7 Coaches	ZMU	Charger + 7 Coaches	ZMU
Base Condition	90/60	-	31	-	32	-		
Torrey Pines	110/60	Base	19.7	18.4	21	18.4		
UTC	110/60	+2%	20.3	18.9	21.8	19		

# Miramar Realignment

## COMPARATIVE ANALYSIS

Evaluation Criteria	Weight (%)	Torrey Pines	UTC
Travel Time	14	5	4
Environmental Consequences	9	2	4
ROW Impacts and Acquisitions	6	1	3
Connectivity and Travel Demand	13	3	5
Safety Improvements	15	4	4
Constructability, Construction Impacts, and Duration	7	2	3
Capital Costs (includes construction, right-of-way, and design)	8	3	2
Railroad Operation Impacts (during construction)	5	3	2
Operational Complexity (post-construction)	9	2	3
O&M Costs	10	2	3
Community Acceptance	4	2	3
Total Score		292	351

RATING 5 4 3 2 1  
Best ——— Worst



# Miramar Realignment

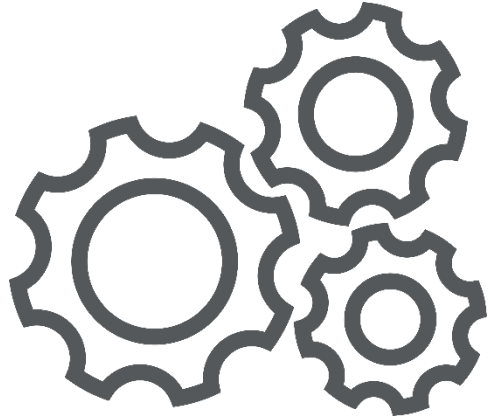
## Preliminary Summary



Issue Area	Torrey Pines	University Town Center
Total Cost	Base	+2%
Total Length (mi)	4.9	5.1
Tunnel Length (ft)	3.2	2.1
Tunnel Depth (ft)*	35 - 245	35 - 150
Elevated Structure (ft)	3,000	4,900
* top of tunnel to existing ground; minimum – maximum depth		

# 5 Tunneling and Fire Life Safety (FLS)

# Tunneling and Fire Life Safety



## **TUNNELING CONSIDERATIONS**

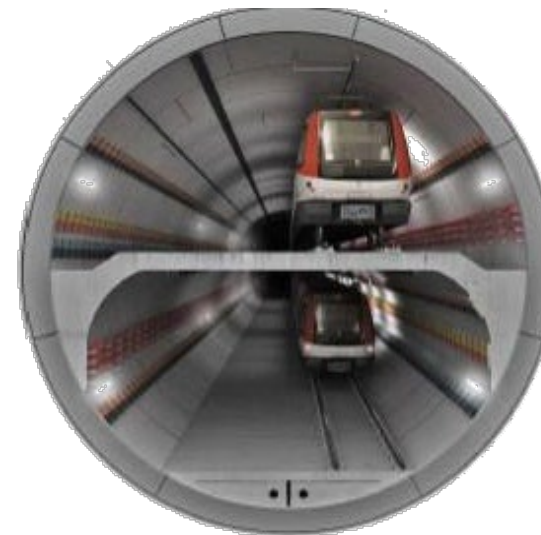
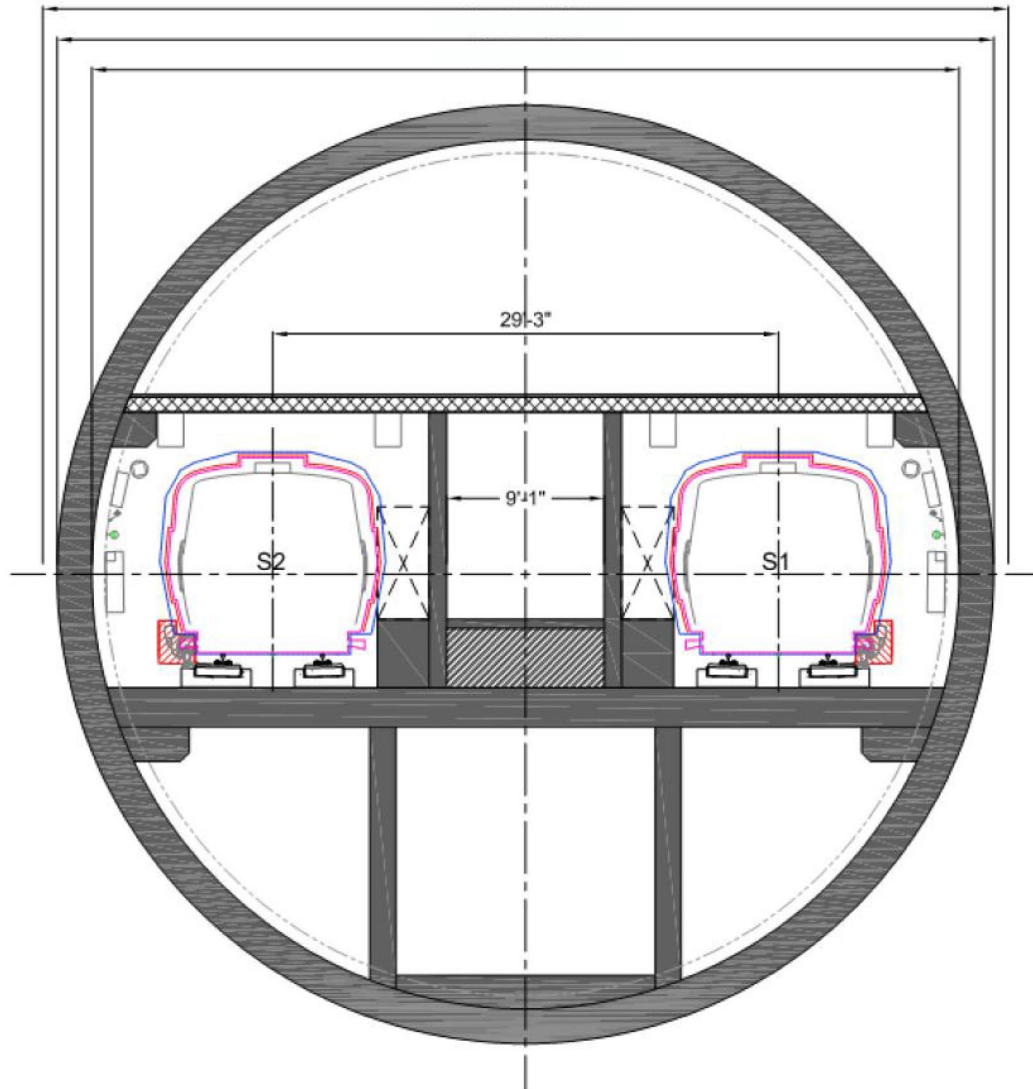
- Tunnel Configurations
- Tunnels in Similar Ground Conditions

## **FIRE LIFE SAFETY (FLS) CONSIDERATIONS**

- Egress
- Ventilation

# Tunnel Configurations

SINGLE BORE





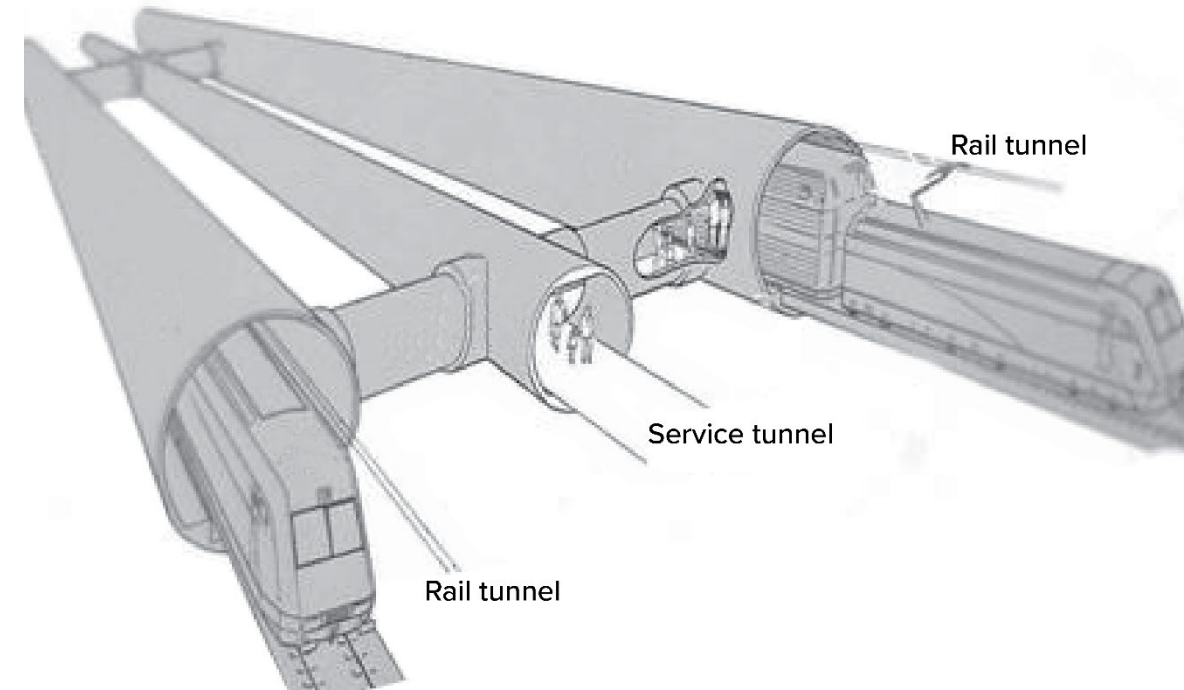
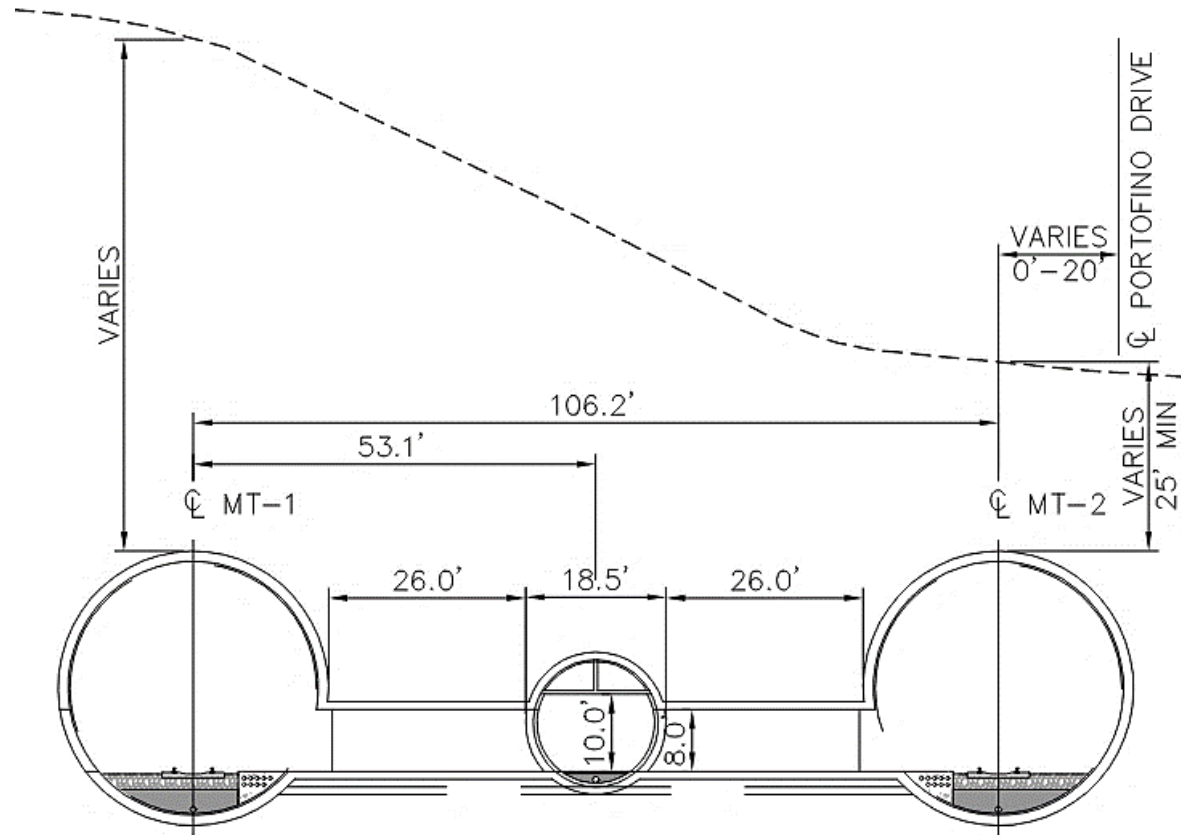
# Tunnel Configurations

TWIN BORE



# Tunnel Configurations

TRIPLE BORE





# Tunnels in Similar Ground Conditions



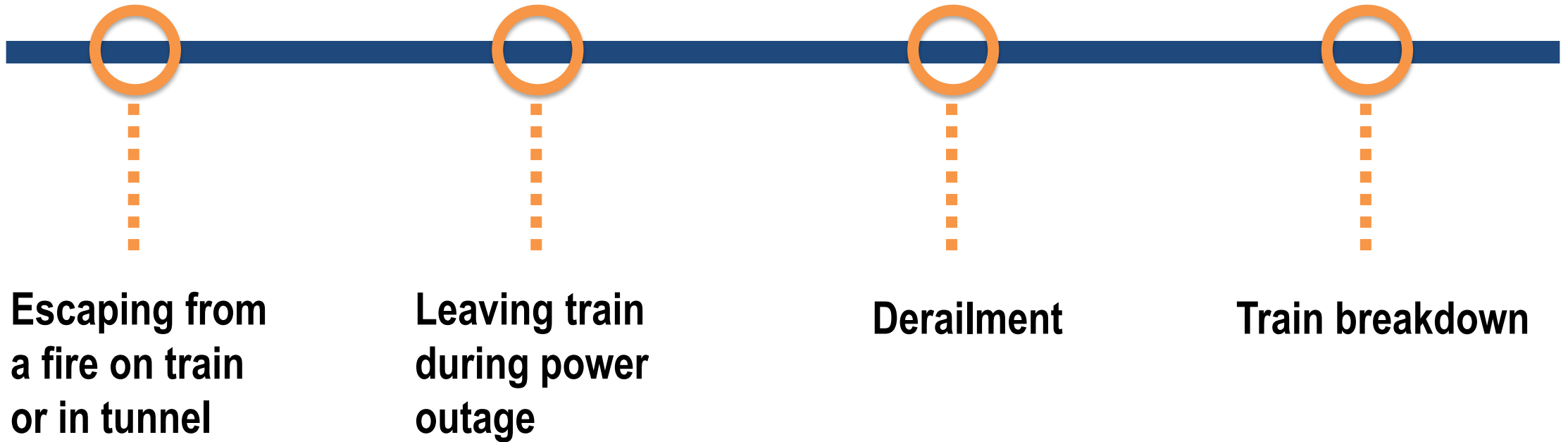
- **Mission Valley East Tunnel** – *San Diego, CA*
- **Courthouse Commons Tunnel** – *San Diego, CA*
- **Regional Connector** – *Los Angeles, CA*
- **Channel Tunnel** – **Between England and France**
- **Alaskan Way Viaduct** – **Seattle, WA**
- **BART to Silicon Valley Phase 2** (design in progress) – **San Jose, CA**

# Tunnels in Similar Ground Conditions



# Fire Life Safety Egress

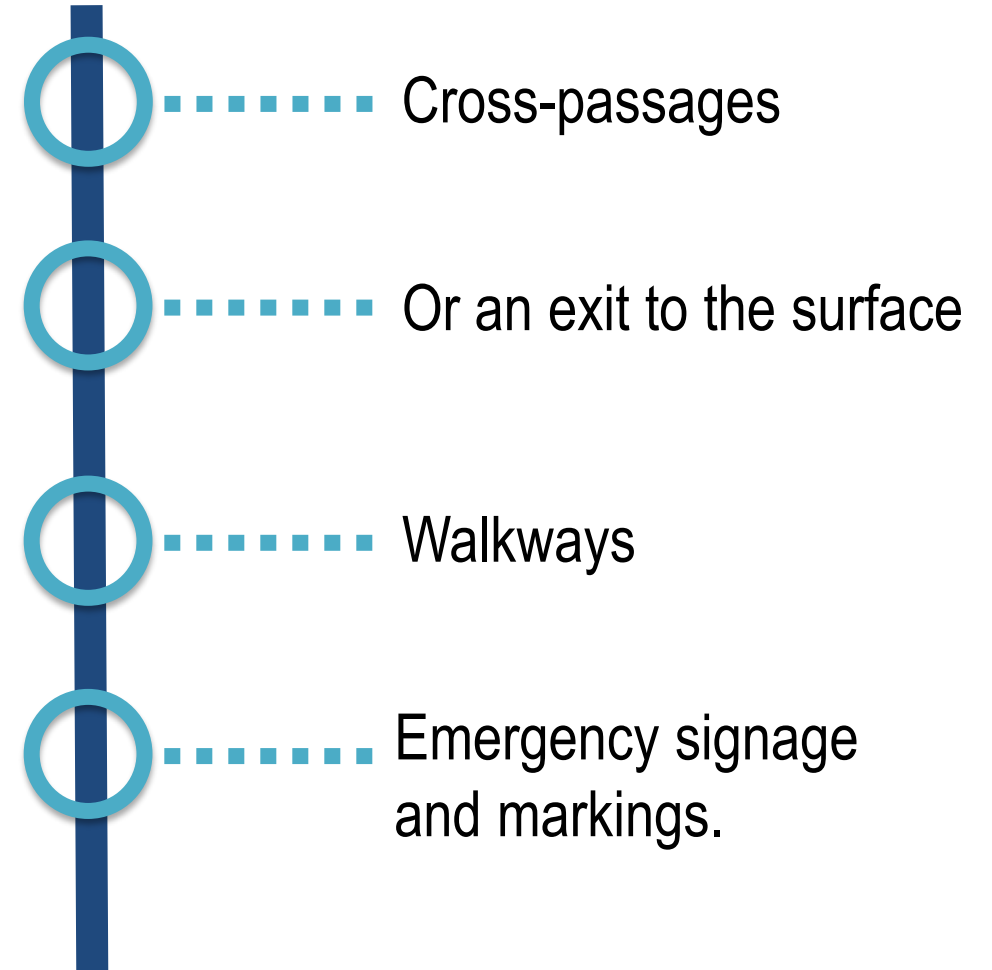
## REASONS FOR EGRESS





# Fire Life Safety Egress

## MEANS OF EGRESS



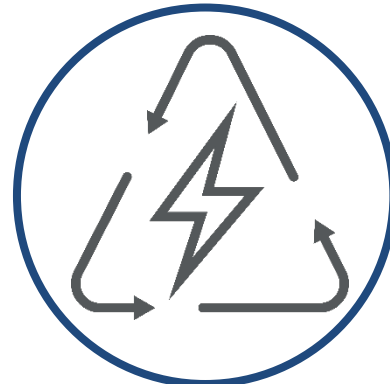
# Need for Ventilation Systems



**Acceptable  
temperatures**



**Decrease  
pollutants**



**Control smoke**

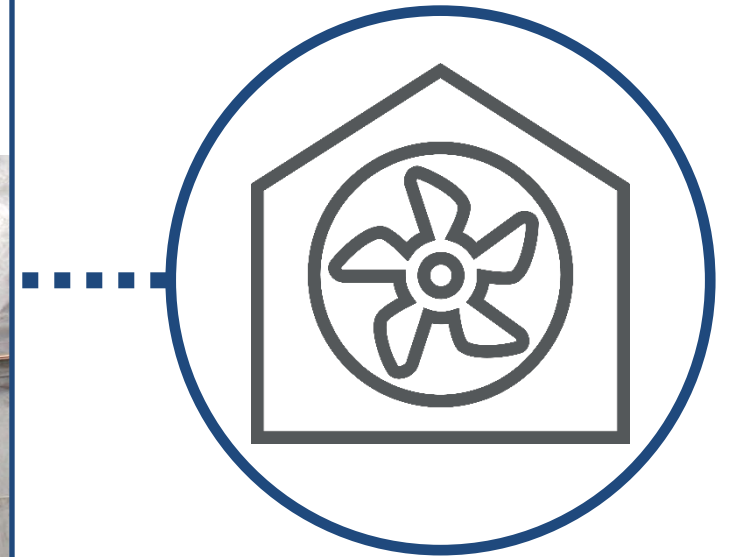
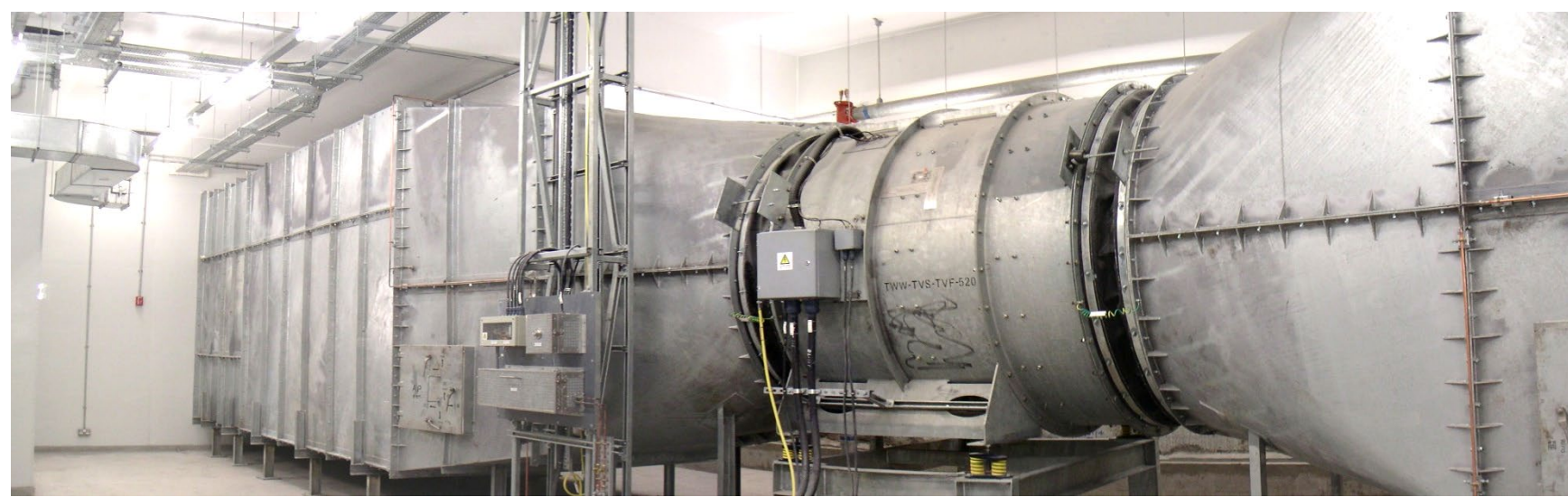


**Code Requirement**



# Ventilation System Components

- Ventilation fans
- Sound attenuators



# 6 Operations

# Operations

## TUNNELS WITH SIMILAR OPERATIONS

### O&M FOR RAIL TUNNELS



# Tunnels with Similar Operations



## US Tunnels

- Moffat Tunnel – Colorado
- B&P Tunnel – Maryland
- Cascade Tunnel – Washington
- Flathead Tunnel - Montana

## International Tunnels

- Channel Tunnel – between England and France
- Gotthard Base Tunnel – Switzerland
- Brenner Pass Tunnel – between Austria and Italy (under construction)
- Loetschberg Tunnel - Switzerland

# O&M for Rail Tunnels



## **Key Operations Considerations**

- Operating tunnel lighting
- Operating fans for ventilation
- Operating pumps for track drains

## **Key Maintenance Considerations**

- Water ingress (leaks)
- Checking and maintaining track
- Checking and maintaining train control and systems



# Study Schedule

Baseline Documents*	Del Mar Tunnel Alternatives Analysis	Miramar Hill Tunnel Alternatives Analysis	Corridor Wide Higher Speed Evaluation	Cost Estimates, Phasing and Implementation Plan
Summer 2021	Summer 2021	Fall 2021	Fall 2021	Spring 2022
Public Outreach				

*\*Baseline Documents are Existing Conditions, Higher Speed Operational Feasibility, Track and Tunnel Basis of Design, Corridor Resiliency*

Study to conclude in April 2022

Future phases of development are pending funding



**Los Angeles – San Diego – San Luis Obispo  
Rail Corridor Agency**

**DRAFT  
Upcoming Agenda Items  
Board of Directors Meeting  
May 17, 2021**

- Second Quarter Budget Status Report
- Second Quarter Grant Status Report
- The Los Angeles – San Diego – San Luis Obispo Rail Corridor Trends for the Fourth Quarter of Federal Fiscal Year 2019-20
- Agreement for Pacific Surfliner Digital Marketing Services
- Consultant Selection to Prepare the Project Report and Environmental Document for the San Diego County Maintenance and Layover Facility Project
- Amendment to Agreement L-9-0001 with Amtrak for Design Services in Support of the Expansion of the Pacific Surfliner Layover Facility in Goleta
- On-Time Performance Analysis
- FY20 Audit Recommendations
- Proposed Adjustment to 2021 Board of Directors and Committee Meeting Schedule
- LOSSAN Logo Unveiling
- San Diego-LOSSAN Regional Rail Corridor Improvement Study Update